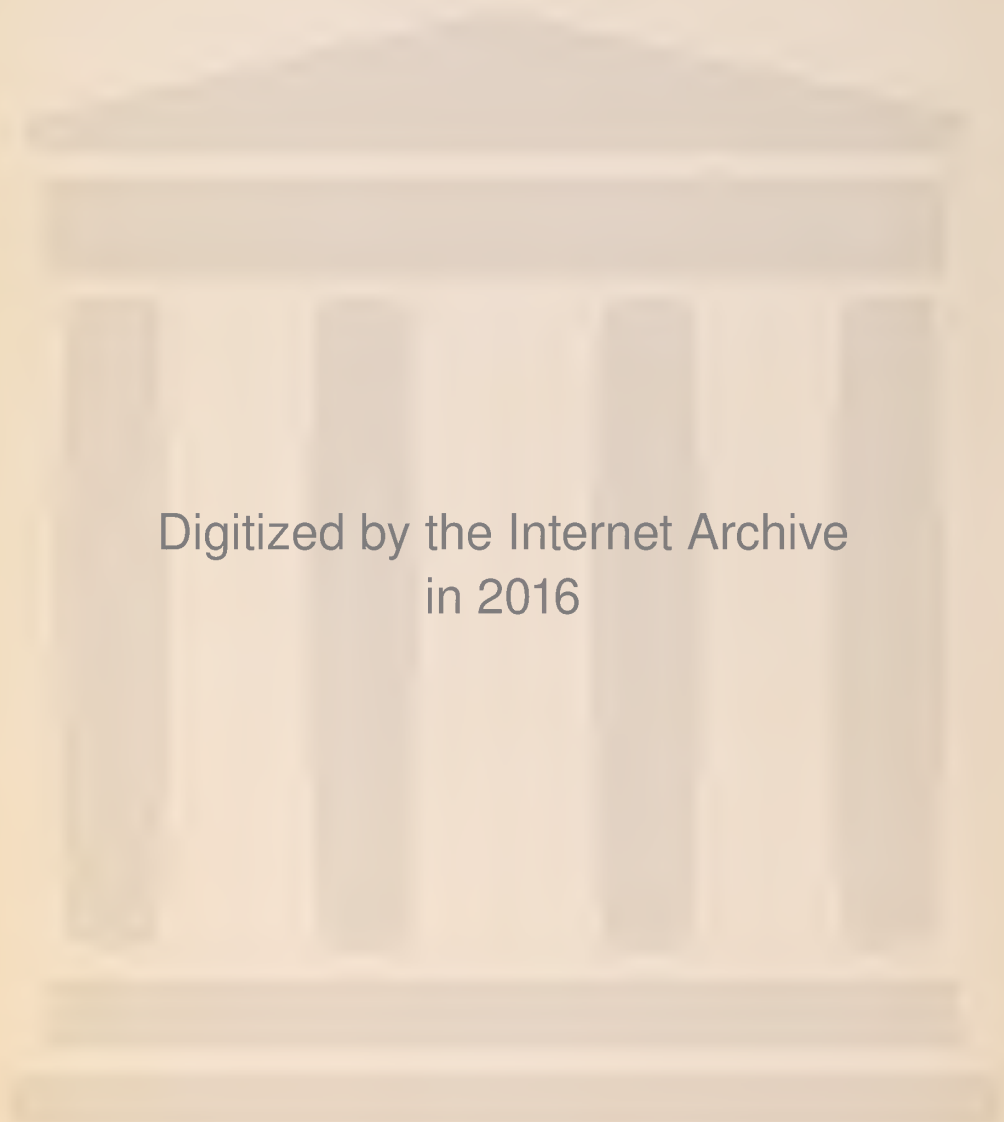
ER

The New York
Academy of Medicine

By Exchange


Digitized by the Internet Archive
in 2016

https://archive.org/details/journaloflouisia115unse

THE JOURNAL OF THE LOUISIANA STATE MEDICAL SOCIETY

Formerly New Orleans Medical and Surgical Journal

•

VOLUME 115

•

JANUARY, 1963

through

DECEMBER, 1963

INDEX TO PAGES OF VOL. 115

Pages	No.	Month	Pages	No.	Month	Pages	No.	Month
1- 32	1	January	157-190	5	May	289-328	9	September
33- 74	2	February	191-224	6	June	329-364	10	October
75-108	3	March	225-258	7	July	365-400	11	November
109-156	4	April	259-288	8	August	401-436	12	December

The Journal of the Louisiana State Medical Society

Established 1844

Published by The Journal of the Louisiana State Medical Society, Inc., under the jurisdiction of the following named Journal Committee:

George H. Hauser, M. D., Ex-Officio
J. E. Knighton, M. D., Chairman
Sam Hobson, M. D., Secretary
A. V. Friedrichs, M. D.
H. H. Hardy, Jr., M. D.
M. D. Paine, Jr., M. D.

EDITORIAL STAFF

Philip H. Jones, M. D.—*Editor*

COLLABORATORS — COUNCILORS

Nicholas J. Chetta, M. D.
J. E. Clayton, M. D.
Guy R. Jones, M. D.
C. E. Boyd, M. D.
Frederick A. Marx, M. D.
John L. Beven, M. D.
J. Y. Garber, M. D.
R. E. C. Miller, M. D.

C. Grenes Cole, M. D.—*General Manager*
1430 Tulane Avenue

SUBSCRIPTION TERMS: $4.00 per year in advance, postage paid, for the United States; $5.00 per year for all foreign countries belonging to the Postal Union.

News material for publication should be received not later than the eighteenth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

Manuscript should be addressed to the Editor, 1430 Tulane Ave., New Orleans, La. 70112

THE JOURNAL *does not hold itself responsible for statements made by any contributor.*

FEB 10 1964
LIBRARY
353196

NAL of the LOUISIANA STATE MEDICAL SOCIETY

JANUARY, 1963

LOUISIANA STATE MEDICAL SOCIETY

Formerly NEW ORLEANS MEDICAL and SURGICAL JOURNAL

OFFICIAL ORGAN OF THE LOUISIANA STATE MEDICAL SOCIETY

Copyright 1963 by
ana State Medical Society.
per annum, 35¢ per copy

Vol. 115, No. 1

Published monthly by
The Journal of the Louisiana State
Medical Society, Inc.
1430 Tulane Ave., New Orleans 12

Contents



Evaluation of Thyroid Function Using I^{131}-tagged Triidothyronine Red Cell Uptake (T^3 Uptake) 1
Richard M. Nunnally, M. D., Baton Rouge

The Gynecological Aspects of the Adrenogenital Syndrome 4
David L. Barclay, M. D. and Joseph F. Dingman, M. D., New Orleans

Arnold's Nerve Reflex; A Little Known Cause of Cough in Pediatric Patients 17
F. Michael Smith, Jr., M. D., Thibodaux

Premenstrual Syndrome: Result of Prophylactic Treatment with Cytran 19
Harry Meyer, M. D., New Orleans

Sublingual Ergotamine Tablets 23
Henry D. Ogden, M. D., New Orleans

Editorial 25

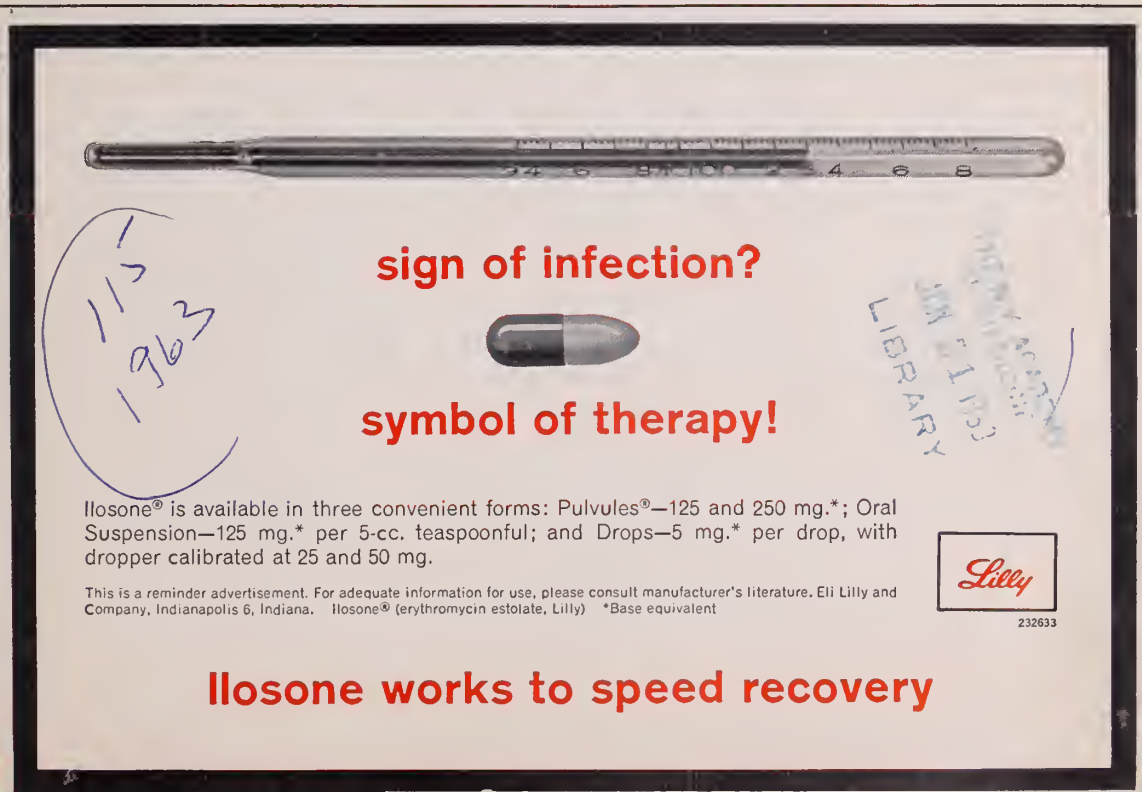
Organization Section 27

Medical News Section 30

Book Reviews 31

Index to Advertisers 38

ANNUAL MEETING — MAY 6-8, 1963 — NEW ORLEANS



1 1 1963
LIBRARY

Second Class Mail Privileges Authorized at New Orleans, Louisiana

Announcing

The Twenty-Sixth Annual Meeting

of

THE NEW ORLEANS GRADUATE MEDICAL ASSEMBLY

Conference Headquarters — Roosevelt Hotel

March 4, 5, 6, 7, 1963

GUEST SPEAKERS

John R. Haserick, M. D., Cleveland, Ohio
Dermatology

Henry J. Tumen, M. D., Philadelphia, Pa.
Gastroenterology

Logan T. Robertson, M. D., Asheville, N. C.
General Practice

Andrew A. Marchetti, M. D., Washington, D. C.
Gynecology

Raymond D. Pruitt, M. D., Houston, Tex.
Internal Medicine

Paul S. Rhoads, M. D., Chicago, Ill.
Internal Medicine

C. H. Hardin Branch, M. D., Salt Lake City, U.
Neuropsychiatry

J. Robert Willson, M. D., Philadelphia, Pa.
Obstetrics

James I. Moore, M. D., Baltimore, Md.
Ophthalmology

James E. Bateman, M. D., Toronto, Ont., Can.
Orthopedic Surgery

Joseph H. Ogura, M. D., St. Louis, Mo.
Otolaryngology

Edward A. Gall, M. D., Cincinnati, Ohio
Pathology

Weston M. Kelsey, M. D., Winston-Salem, N. C.
Pediatrics

Curtice Rosser, M. D., Dallas, Tex.
Proctology

Ted F. Leigh, M. D., Atlanta, Ga.
Radiology

John L. Keeley, M. D., Chicago, Ill.
Surgery

John L. Madden, M. D., New York, N. Y.
Surgery

Edwin P. Alyea, M. D., Durham, N. C.
Urology

Additional guest speaker to be announced

Lectures, symposia, clinicopathologic conferences, round-table luncheons, medical motion pictures, technical exhibits and entertainment for visiting wives.

(All-inclusive registration fee — $20.00)

Sponsored in cooperation with the Louisiana Chapter of the American Academy of General Practice. Acceptable for twenty-nine (29) hours Category I Credit.

THE CLINICAL TOUR TO MEXICO VISITING MEXICO CITY, CUERNAVACA, TAXCO AND ACAPULCO

Leaving March 8 via air and returning March 23, 1963
(Optional extensions may be arranged)

For information concerning the Assembly meeting and tour write Secretary, Room 105, 1430 Tulane Avenue, New Orleans 12, La.



Louisiana State Board of Health

W. J. REIN, M.D.,

President



BOTTLED UNDER AUTHORITY OF THE COCA-COLA COMPANY BY
THE LOUISIANA COCA-COLA BOTTLING CO., LTD.



You Know--

that we know!

TRUSTED MANY MILLIONS OF TIMES

GOOD DRUG STORES ONLY THE BEST
Katz & Besthoff, Inc.

Prescription Headquarters Since 1905

MEDICAL BOOKS
Of All Publishers
Any book on Medicine, Surgery, and Nursing

J. A. MAJORS COMPANY

147 South Liberty St.

NEW ORLEANS 12, LA.

——Catalogs cheerfully sent upon request——

ANNUAL MEETING

Louisiana State Medical Society

MAY 6-8, 1963

NEW ORLEANS

SPECIAL COUGH FORMULA
for Children

Pediacof®

SOOTHING DECONGESTANT AND EXPECTORANT

Each teaspoon (5 ml.) contains:

Codeine phosphate	5.0 mg.
Neo-Synephrine® hydrochloride (brand of phenylephrine hydrochloride)	2.5 mg.
Chlorpheniramine maleate	0.75 mg.
Potassium iodide	75.0 mg.



Bright red, pleasant tasting, raspberry flavored syrup

Dosage:

Children from 6 months to 1 year, 1/4 teaspoon; 1 to 3 years, 1/2 to 1 teaspoon; 3 to 6 years, 1 to 2 teaspoons; 6 to 12 years, 2 teaspoons. Every four to six hours as needed.

How Supplied:
Bottles of 16 fl. oz.

Available on prescription only.

Exempt Narcotic

Winthrop
LABORATORIES
New York 18, N. Y.



A special formulation for those troublesome cases of acute nonspecific diarrhea

DONNAGEL®-PG

Donnagel® with paregoric equivalent

Provides greater assurance of more comprehensive relief in acute self-limiting diarrheas through the time-tested effectiveness of two outstanding antidiarrheals—DONNAGEL and a paregoric equivalent. *Tastes good, too!*

Each 30 cc. (1 fl. oz.) of DONNAGEL-PG contains:

Powdered opium U.S.P. (equivalent to paregoric 6 ml.)	24.0 mg.
Kaolin	6.0 Gm.
Pectin	142.8 mg.
Natural belladonna alkaloids	
hyoscyamine sulfate	0.1037 mg.
atropine sulfate	0.0194 mg.
hyoscine hydrobromide	0.0065 mg.
Phenobarbital (1/4 gr.)	16.2 mg.

SUPPLIED: Pleasant-tasting banana flavored suspension in bottles of 6 fl. oz.

Also available:

DONNAGEL® with NEOMYCIN— for control of bacterial diarrheas.

DONNAGEL®— the basic formula — when paregoric or an antibiotic is not required.

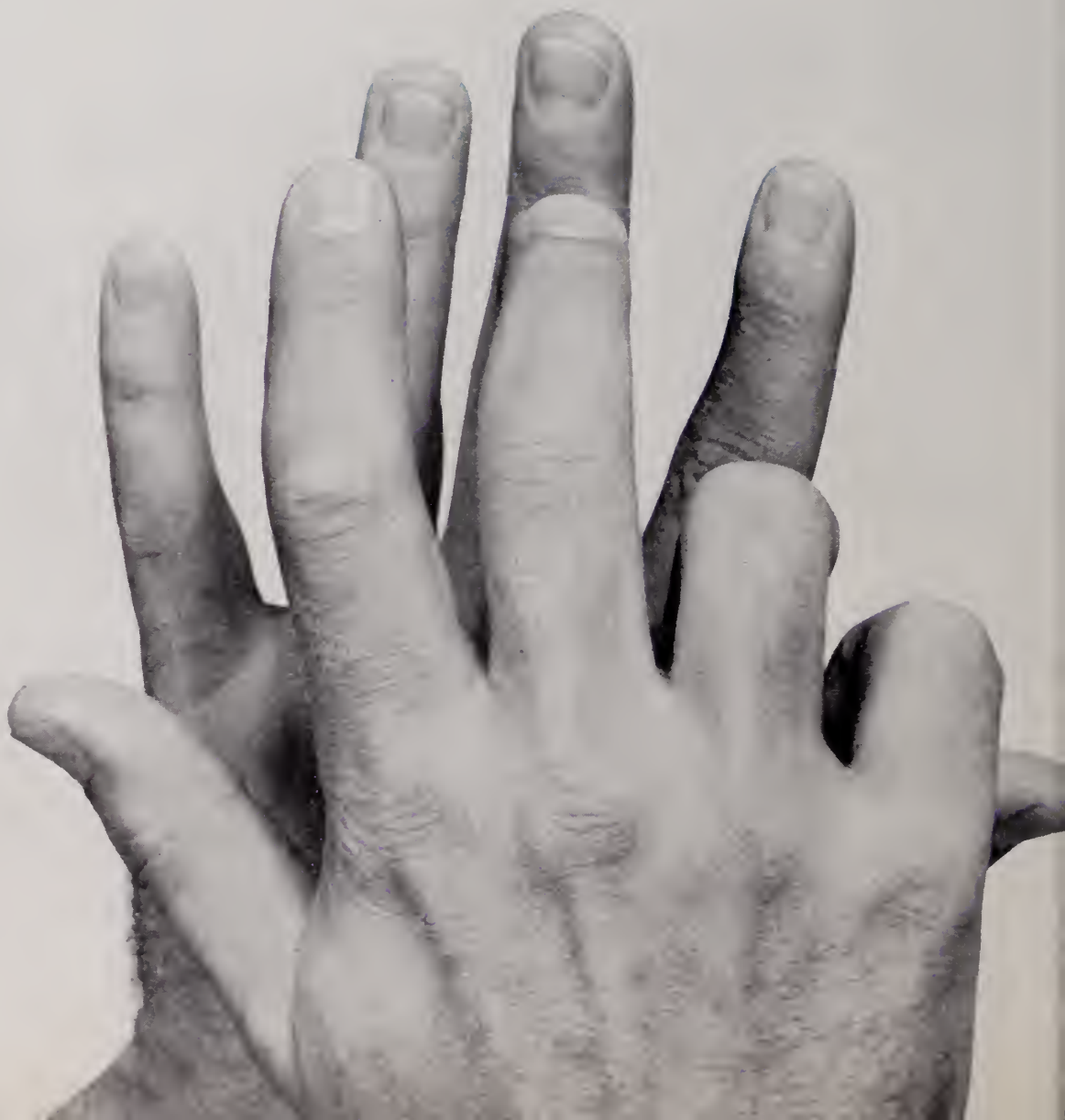
A. H. ROBINS CO., INC. Robins
RICHMOND 20, VIRGINIA

in severe respiratory infections
refractory to other measures.

CHLOROMYCETIN®

(chloramphenicol, Parke-Davis)

for established clinical efficacy against susceptible organisms[1]



In Friedlander's Pneumonia[3,13]

Although the prognosis in Friedlander's pneumonia is poor, treatment with CHLOROMYCETIN has shown a good response when susceptible strains of *Klebsiella pneumoniae* are incriminated.

In *Hemophilus Influenzae* Pneumonia[3,4,13,14]

Because the invading organism is usually sensitive to CHLOROMYCETIN, this agent is generally effective in pneumonias caused by *H. influenzae.*

In Staphylococcal Pneumonia[1-8,13]

CHLOROMYCETIN continues to remain effective against many resistant strains of staphylococci, and—alone or in combination with other antibiotics—should be considered when other antistaphylococcal drugs are ineffective.

In Acute Epiglottitis[4,10,11]

This condition is most often caused by *H. influenzae,* most strains of which are sensitive to CHLOROMYCETIN. Therapy should be instituted at once, since the disease may progress from the first symptoms to a severe respiratory obstruction in four to six hours.

In Pneumonias Due to Gram-negative Bacilli[9]

Because of its broad-spectrum activity, CHLOROMYCETIN is often effective in pneumonias caused by sensitive strains of *Aerobacter, Proteus* of various species, *Paracolobactrum,* and other gram-negative pathogens encountered with increasing frequency in serious respiratory tract infections.

In Staphylococcal Empyema[12]

The infiltrating lesions of staphylococcal empyema are often difficult to eradicate. While CHLOROMYCETIN should only be used when the infection has been resistant to treatment with other antistaphylococcal drugs, therapy with CHLOROMYCETIN, in conjunction with surgical procedures, will often bring favorable results.

CHLOROMYCETIN (chloramphenicol, Parke-Davis) is available in various forms, including Kapseals® of 250 mg., in bottles of 16 and 100. See package insert for details of administration and dosage.

Warning: Serious and even fatal blood dyscrasias (aplastic anemia, hypoplastic anemia, thrombocytopenia, granulocytopenia) are known to occur after the administration of chloramphenicol. Blood dyscrasias have occurred after both short-term and prolonged therapy with this drug. Bearing in mind the possibility that such reactions may occur, chloramphenicol should be used only for serious infections caused by organisms which are susceptible to its antibacterial effects. Chloramphenicol should not be used when other less potentially dangerous agents will be effective, or in the treatment of trivial infections such as colds, influenza, or viral infections of the throat, or as a prophylactic agent.

Precautions: It is essential that adequate blood studies be made during treatment with the drug. While blood studies may detect early peripheral blood changes, such as leukopenia or granulocytopenia, before they become irreversible, such studies cannot be relied upon to detect bone marrow depression prior to development of aplastic anemia.

References: (1) Thacher, H. C., & Fishman, L.: *J. Maine M. A.* **52**:84, 1961. (2) Hopkins, E. W.: *Postgrad. Med.* **29**:451, 1961. (3) Hall, W. H.: *M. Clin. North America* **43**:191, 1959. (4) Krugman, S.: *Pediat. Clin. North America* **8**:1199, 1961. (5) Ede, S.; Davis, G. M., & Holmes, F. H.: *J.A.M.A.* **170**:638, 1959. (6) Wolfsohn, A. W.: *Connecticut Med.* **22**:769, 1958. (7) Calvy, G. L.: *New England J. Med.* **259**:532, 1958. (8) Hendren, W. H., III, & Haggerty, R. J.: *J.A.M.A.* **168**:6, 1958. (9) Cutts, M.: *Rhode Island M. J.* **43**:388, 1960. (10) Berman, W. E., & Holtzman, A. E.: *California Med.* **92**:339, 1960. (11) Vetto, R. R.: *J.A.M.A.* **173**:990, 1960. (12) Sia, C. C. J., & Brainard, S. C.: *Hawaii M. J.* **17**:339, 1958. (13) Rosenthal, I. M.: *GP* **17**:77 (March) 1958. (14) Gaisford, W.: *Brit. M. J.* **1**:230, 1959.

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit 32, Michigan

03863



For peptic ulcer gastric hyperacidity and gastritis...

In year-long study on peptic-ulcer patients

New Creamalin®
Antacid Tablets

*"...faster in onset of action...and for a longer period"**

"Clinical studies in 85 patients with duodenal ulcer ...confirmed the superiority of the new preparation [new Creamalin] over standard aluminum hydroxide preparations, in that prompt relief was achieved and maintained throughout the period of observation."*

Patients were followed for about one year.

New Creamalin promotes ulcer healing, permits less frequent feedings because it is so long-acting. Heartburn and epigastric distress were "...easily and adequately controlled...."* New Creamalin has the therapeutic advantage of a liquid antacid with the convenience of a palatable tablet. *It does not cause constipation.*

Each new Creamalin tablet contains 320 mg. of specially processed highly reactive dried aluminum gel (stabilized with hexitol) with 75 mg. of magnesium hydroxide. Minute particles offer a vastly increased surface area.

Dosage: Gastric hyperacidity—from 2 to 4 tablets as needed. Peptic ulcer or gastritis—from 2 to 4 tablets every two to four hours. *How Supplied:* Bottles of 50, 100, 200 and 1000.

Now also available—New Creamalin Improved Formula Liquid. Pleasant mint flavor—creamy pink color. Stabilized reactive aluminum and magnesium hydroxide gel (1 teaspoon equals 1 tablet). Bottles of 8 and 16 fl. oz.

Creamalin, trademark reg. U.S. Pat. Off.

*Schwartz, I. R.:
Current Therap. Res. 3:29, Feb., 1961.

Winthrop LABORATORIES New York 18 N.Y.

RELIEVE THE COLD SUPPRESS THE COUGH WITH NEW

'EMPRAZIL-C'

TABLETS

ANTITUSSIVE ▪ DECONGESTANT ▪ ANALGESIC

Each tablet contains:

Codeine Phosphate*	15 mg.
'Sudafed'® brand Pseudoephedrine Hydrochloride	20 mg.
'Perazil'® brand Chlorcyclizine Hydrochloride	15 mg.
Acetophenetidin	150 mg.
Aspirin (Acetylsalicylic Acid)	200 mg.
Caffeine	30 mg.

*Warning—may be habit forming.

Complete literature available on request.

Also available without codeine as

'EMPRAZIL'®

TABLETS



BURROUGHS WELLCOME & CO. (U.S.A.) INC., TUCKAHOE, N.Y.

what your patients need to know about Aspirin



As you know, the confidence your patients place in a certain treatment or drug often helps to reinforce the relief they get from it. That's why it's often a good idea to explain the reasons for your recommendations, even in the simplest cases.

For example, aspirin. You probably recommend it more than any other drug, as an analgesic, as an antipyretic, as an aid to sleep when restlessness is caused by minor discomforts. Certainly aspirin is the most versatile and one of the most effective drugs in the arsenal of medicine.

But aspirin is such a common and such a safe drug that most laymen vastly underrate it. To use it with the utmost confidence, they need to know more about it. So next time, take a minute or two to explain what a uniquely valuable drug aspirin really is. You know it; your patients will be reassured to know it, too.

5-grain tablets

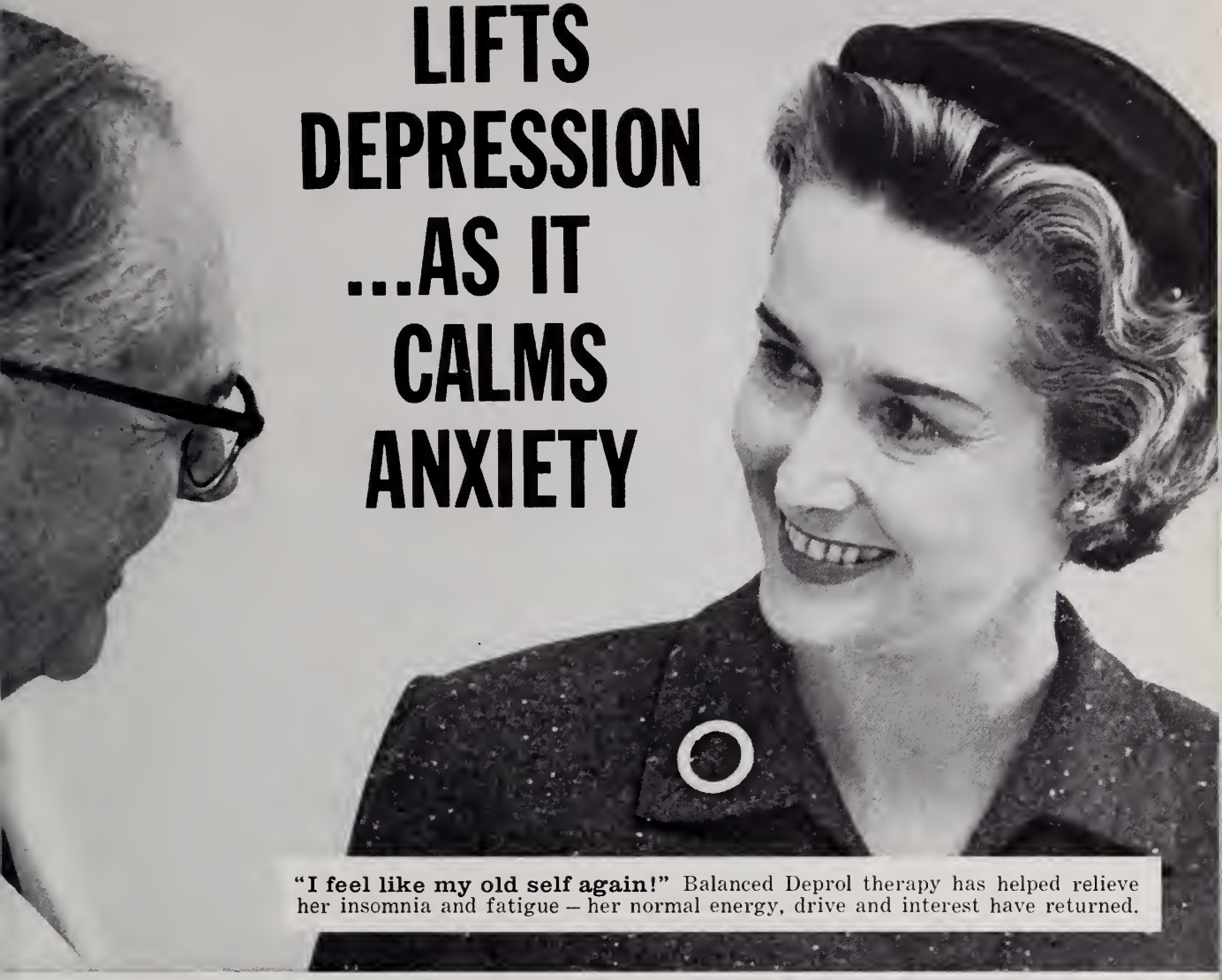


1¼-grain tablets



For professional samples,
write The Bayer Company,
1450 Broadway,
New York 18, N. Y.

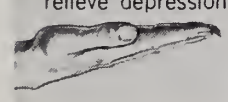
LIFTS DEPRESSION ...AS IT CALMS ANXIETY



"I feel like my old self again!" Balanced Deprol therapy has helped relieve her insomnia and fatigue – her normal energy, drive and interest have returned.

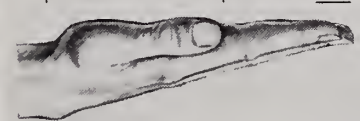
Brightens mood...relaxes tension

Energizers relieve depression





Deprol both lifts depression and calms anxiety





Tranquilizers reduce anxiety

CD-7393

Dosage: Usual starting dose is 1 tablet q.i.d. When necessary, this may be increased gradually up to 3 tablets q.i.d. With establishment of relief, the dose may be reduced gradually to maintenance levels.

Composition: 1 mg. 2-diethylaminoethyl benzilate hydrochloride (benactyzine HCl) and 400 mg. meprobamate.

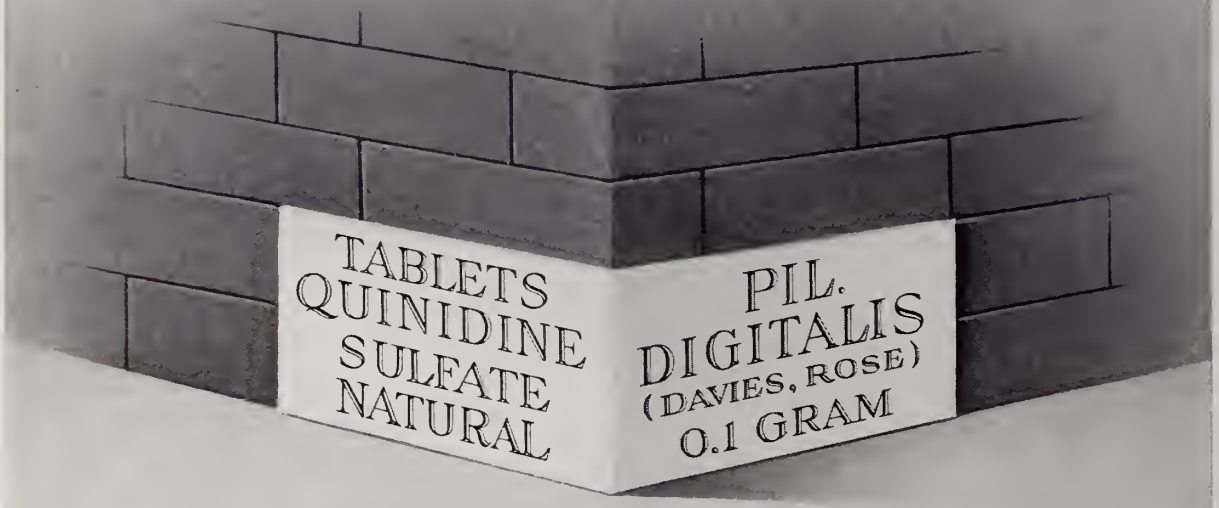
Supplied: Bottles of 50 light-pink, scored tablets.

Write for literature and samples.

▲Deprol▲®

WALLACE LABORATORIES
Cranbury, N.J.

A CORNERSTONE OF CARDIAC THERAPY



The Dictionary defines a cornerstone as something of fundamental importance, just as Pil. Digitalis, (Davies, Rose) and Tablets Quinidine Sulfate Natural (Davies, Rose) are of fundamental importance in treating your cardiac patients. These preparations represent 60 years of experience and dependability in the manufacture of pharmaceuticals.

Pil. Digitalis (Davies, Rose), 0.1 Gram (approx. 1½ grains) which comprise the entire properties of the leaf, provide a dependable and effective means of digitalizing the cardiac patient, and of maintaining the necessary saturation.

Tablets Quinidine Sulfate Natural, 0.2 Gram (approx. 3 grains) are alkaloidally assayed and standardized, insuring uniformity and therapeutic dependability. Each tablet is scored for the convenient administration of half dosages.

Davies, Rose & Company, Limited - Boston 18, Mass.

DQ-2



who coughed?

HYCOMINE® SYRUP for COUGHS

provides fast and long-lasting cough control

relieves cough in 15-20 minutes • lasts 6 hours or longer • promotes expectoration and decongestion of air passages • rarely constipates • agreeably cherry-flavored

Each teaspoonful (5 cc.) of HYCOMINE Syrup contains:

Hycodan®	6.5 mg.
Dihydrocodeinone Bitartrate (Warning: May be habit-forming)	5 mg.
Homatropine Methylbromide	1.5 mg.
Pyrilamine Maleate	12.5 mg.
Phenylephrine Hydrochloride	10 mg.
Ammonium Chloride	60 mg.
Sodium Citrate	85 mg.

Average adult dose: One teaspoonful after meals and at bedtime. May be habit-forming. On oral prescription where state laws permit. U.S. Pat. 2,630,400.

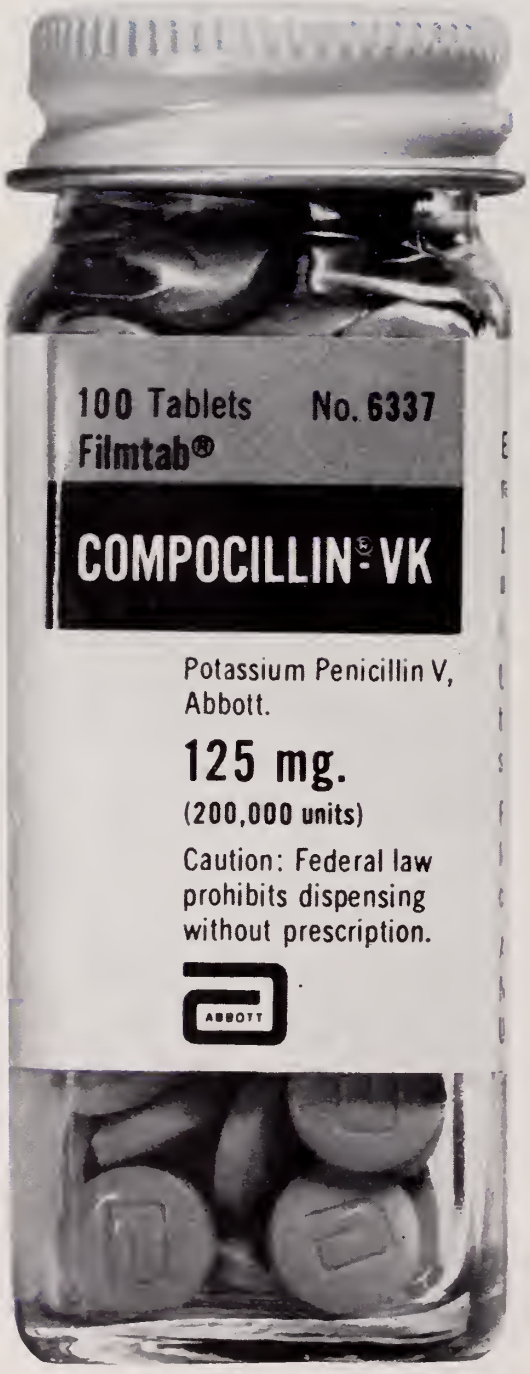
Literature on request

Endo®

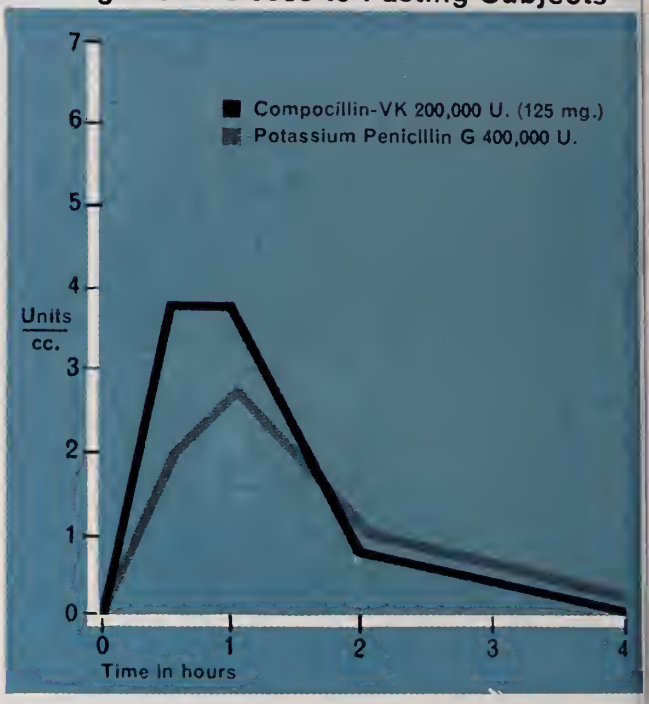
ENDO LABORATORIES
Richmond Hill 18, New York

Here's a penicillin that gives you...

PATIENT ECONOMY WHEN YOU WANT IT



Single Oral Doses to Fasting Subjects*



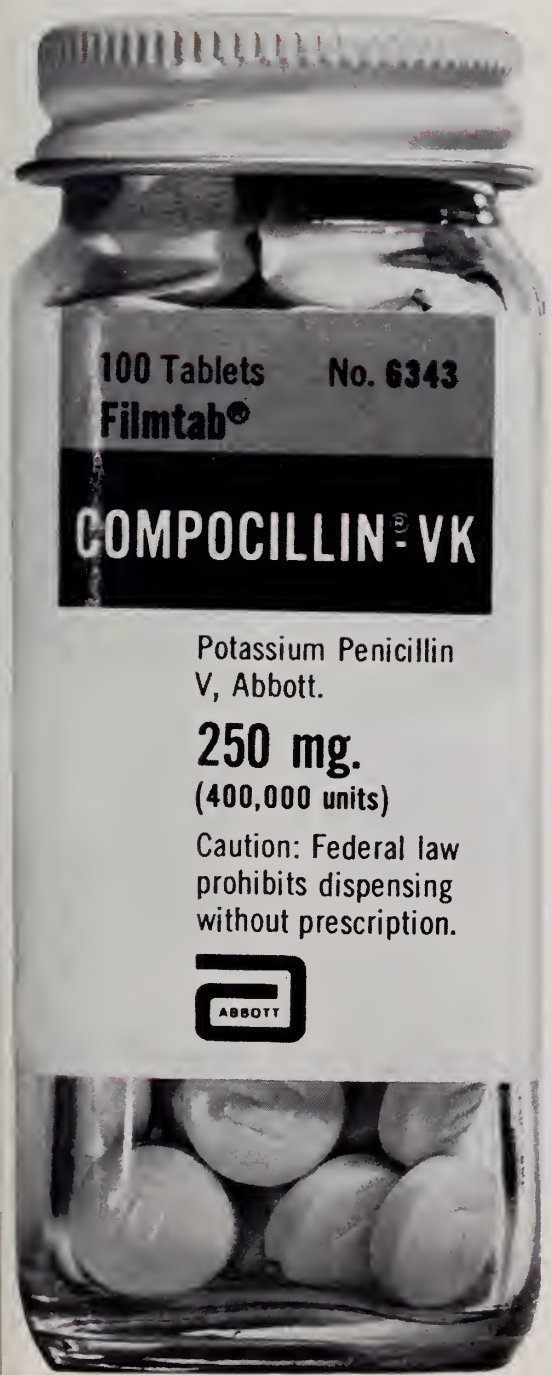
Consider milder bacterial infections

An example might be a respiratory infection. Here economy could be a definite factor in your thinking. In the chart above, you'll see that 200,000 units (125 mg.) of Compocillin VK produces blood levels at least equal to those obtained with 400,000 units of oral penicillin G potassium. This means that in less severe infections, Compocillin-VK may be given at *half* the dosage needed with oral penicillin G—with no sacrifice in blood levels. In these cases, the cost of Compocillin-VK therapy will be no more—and often will be less—than treatment with oral penicillin G.

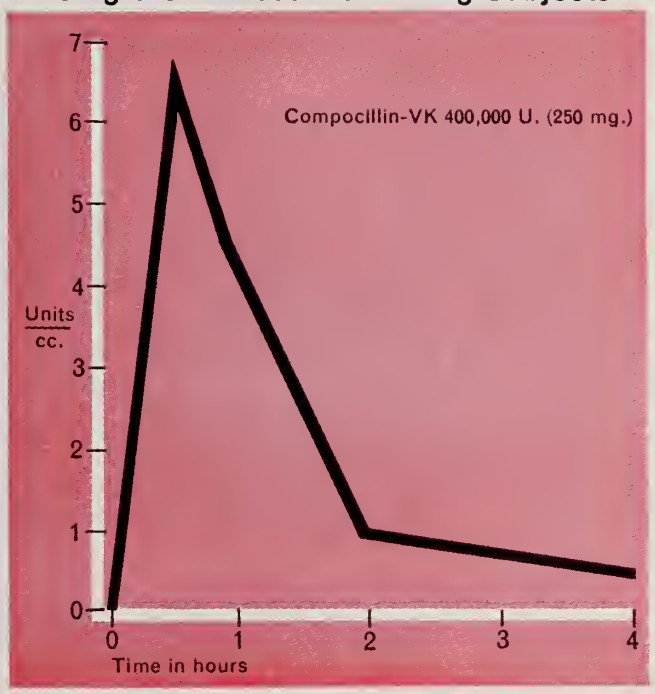
Compocillin-VK—the original potassium penicillin V • In Filmtab (125 and 250 mg.) and cherry-flavored Granules for Oral Suspension

Filmtab—Film-sealed tablets. Abbott: U.S. Pat. No. 2,881,085

PEAK EFFICIENCY WHEN YOU NEED IT



Single Oral Doses to Fasting Subjects*



Then, for severe infections...

. . . where your primary concern is high peak serum concentrations, you can prescribe Compocillin-VK at *full therapeutic dosage* and get the maximum antibacterial activity possible with an oral penicillin. The chart above shows the rapid peak blood levels obtained with 400,000 units (250 mg.) of Compocillin-VK. Actually, these peaks occur faster—and are higher—than those obtained with intramuscular penicillin G. Indeed, Compocillin-VK has been used in cases previously reserved for parenteral treatment. The safety advantage (oral vs. injectable) goes without saying.

*Chart data from two separate studies completed by the Microbiologic and Medical Departments of Abbott Laboratories.

ABBOTT LABORATORIES NORTH CHICAGO, ILLINOIS

210274

Trocinate®

Brand of Thiphenamil HCl.

FOR DIVERTICULITIS, MUCUS COLITIS,

IRRITATIVE DIARRHEA, IRRITATIVE URETERITIS,

BLADDER SPASM

*T*rocinate is a musculotropic antispasmodic with no appreciable anticholinergic action. It relieves spasms of the lower bowel and genito-urinary tract by direct action on the contractile mechanism of smooth muscles. The absence of any appreciable action on the autonomic nervous system eliminates the usual side-effects. It may be safely used in glaucoma. Each tablet contains 100 mgs. Trocinate HCl.

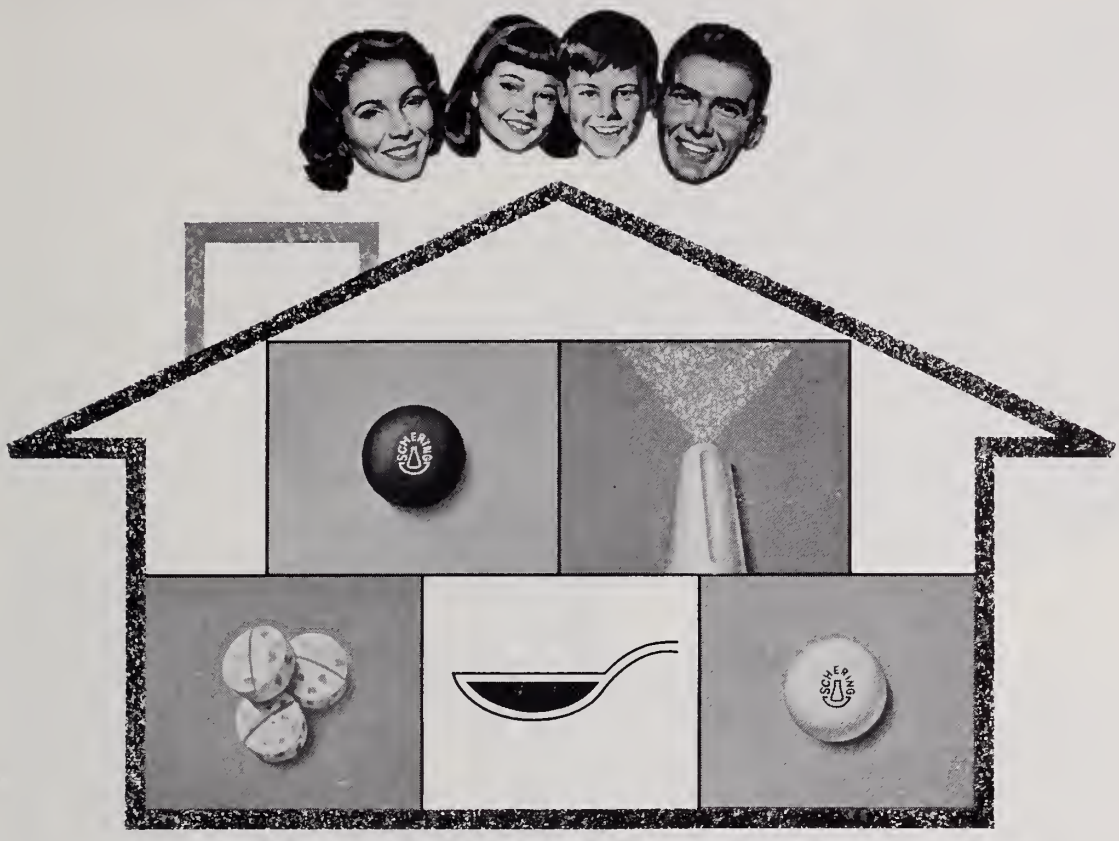
USUAL DOSAGE: 2 tablets, 4 times a day. Maintenance dosage is frequently lower.

Dispensed in bottles of 40 and 250 tablets.

WM. P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA

Manufacturers of ethical pharmaceuticals since 1856

for over 12 years dependably effective



a family of products for family cold needs

CORICIDIN®

for colds

Schering

CORICIDIN,® brand of antihistamine-analgesic-antipyretic compound.



Cleanliness is more than a virtue at Lilly; it is a routine. It starts with vacuum-cleaning the drums filled with raw material even before they enter a Lilly warehouse. It is the first of an endless list of rules that have become a way of life for Lilly employees. Although meticulous housekeeping has little to do with technical know-how, it adds immeasurably to the quality of the finished product.

Eli Lilly and Company · Indianapolis 6, Indiana, U.S.A.

Lilly

390016

The Journal

of the

Louisiana State Medical Society

$4.00 Per Annum, 35c Per Copy
Vol. 115, No. 1

JANUARY, 1963

Published Monthly
1430 Tulane Avenue, New Orleans 12, La.

Evaluation of Thyroid Function Using I^{131}-tagged Triidothyronine Red Cell Uptake (T^3 Uptake)

• T^3 uptake offers advantages in diagnosis. Correlation with the clinical impression equals or exceeds the BMR, PBI or I^{131}. Organic iodine does not impair the accuracy of the test.

RICHARD M. NUNNALLY, M. D.*
Baton Rouge

NO single test now available satisfies all the criteria for evaluation of thyroid function. Therefore, it is important to use the procedures available selectively, in accord with the needs of the individual patient. The recent introduction of an I^{131}-tagged triidothyronine red cell uptake test (T^3 uptake) offers certain advantages which make it worthy of consideration along with the in vivo I^{131} uptake, protein bound iodine (PBI) and basal metabolic rate (BMR).

Physiology of Thyroid Gland and Iodine

The formation of thyroxine, as of all the hormones, is extremely complex. For the purpose of this report, a simplified scheme is presented:[1, 2]

I. **Trapping:** The thyroid gland readily takes up inorganic iodine from the plasma in a process referred to as "iodine trapping".

II. **Synthesis and Storage:** In the ensuing synthesis, iodides are oxidized to molecular iodine and linked to tyrosine as mono- and diiodotyrosine. Subsequently, triiodothyronine (T^3) and tetraiodothyronine (thyroxine) are formed and stored mainly as thyroglobulin in the thyroid follicles. Some thyroxine may be released directly into the blood.

III. **Release:** In order to release stored triiodothyronine and thyroxine to the blood stream, a protease, cathepsin, splits the thyroglobulin.

IV. **Transport:** Thyroxine is bound and transported on a carrier system consisting of alpha globulins, albumin, and red blood cells. The major portion of the hormone is carried by the alpha globulins. As this portion becomes relatively saturated, more thyroxine goes to albumin and red cells. Triiodothyronine is transported by the same carrier system, but is more loosely bound than thyroxine.

* Pathologist, Our Lady of the Lake Hospital, Baton Rouge, Louisiana.

V. **Utilization:** Thyroxine effect is at the cellular metabolism level. Residual iodine reenters the "iodine trapping" stage.

VI. **Degradation:** The thyroxine which is not utilized in cellular metabolism is degraded and excreted by the liver and kidneys.

VII. **Control:** Iodine trapping and thyroxine synthesis and release are under the control of thyroid stimulating hormone (TSH) from the anterior pituitary gland. Increasing the level of protein bound thyroxine in the blood stream suppresses the output of TSH, apparently in the same manner that cortisone suppresses ACTH. Hypothalamic influences are less clearly understood.

Rationale of T^3 Uptake Test

The T^3 uptake measures the carrier system of thyroid hormone. It has been shown that when there is an excess of circulating thyroxine, the primary carrier system (alpha globulin) is relatively saturated. When the capacity of alpha globulin to bind T^3 is exceeded, the excess is taken up by albumin and the erythrocytes. When circulating thyroxine is low, more space is available in the alpha globulin system, and albumin and the erythrocytes will take up only that portion remaining after the alpha globulin has been saturated. In brief, when the level of circulating thyroid hormone is elevated, red cell uptake of T^3 will be increased, and when the hormone level is lowered, red cell uptake of T^3 will be decreased.[3, 4]

Procedure

1. Withdraw 10 ml. of venous blood from the patient using balanced double oxylate as preservative.

2. Dilute fresh I^{131} labeled triiodothyronine with saline so that the final solution contains 0.001-0.012 micrograms per 0.1 ml.

3. Place 3 ml. of blood into a 10 ml. erlenmeyer flask and add 0.1 ml. of the above diluted T^3 solution. Stopper flasks with rubber stoppers and agitate before placing in incubator. Incubate for two hours at 37 degrees C. with intermittent agitation.

4. At the end of the incubation period, pipet two 1 ml. aliquots of whole blood into separate tubes. Count each sample for three to five minutes in a scintillation well counter and correct for background.

5. Add 7-10 ml. of normal saline (room temperature) to each aliquot and centrifuge for five minutes at 3000 rpm. Remove supernatent fluid. (Use spinal needle and do not disturb the erythrocyte layer.)

6. Wash 4 more times with ten-fold volumes of isotonic saline. After the final washing do not reconstitute with saline. (This leaves approximately 1 ml. of solution).

7. Count each sample again for three to five minutes and correct for background.

8. With hematocrit determination, calculate per cent red blood cell uptake of T^3 as follows:

$$\frac{\text{Counts in Washed RBC per Minute minus Background}}{\text{Counts in Unwashed RBC and Plasma per Minute minus Background}} \times \frac{100}{\text{Hematocrit}} \times 100$$

The normal values for males range from 11 to 19 per cent, and for females 11 to 17 per cent. The hypothyroid range is 5 to 11 per cent, the hyperthyroid range 17 to 38 per cent. Variations in methodology may cause slight differences in results.

Discussion

Robbins, Garcia, McCoy, Hamolsky and others have assessed the value of the T^3 uptake.[4-6, 3] The concensus of opinion is that the degree of correlation with the clinical impression either equals or exceeds that obtained from the PBI, in vivo I^{131} uptake or BMR.

Hamolsky found that pregnancy, estrogen therapy, propylthiouracil and large doses of iodines reduced the T^3 red cell

uptake. The effects of a variety of unrelated non-thyroid factors have been evaluated and are summarized in Table 1.[7]

TABLE 1

EFFECT OF UNRELATED FACTORS ON IN VITRO RED BLOOD CELL UPTAKE OF RADIOIODINATED TRIIODOTHYRONINE[7]

Factors causing a decrease in uptake:

1. Pregnancy
2. Estrogen
3. Propylthiouracil in hyperthyroidism
4. Iodide in hyperthyroidism

Factors having no (or slight) effect on uptake:

1. Thyroid enlargement—nontoxic nodular or colloid goiter, thyroid carcinoma
2. Other endocrinopathies—diabetes mellitus, Addison's disease
3. Anxiety
4. Congestive heart failure
5. Hypertension
6. Exogenous iodine
7. Mercury

Factors causing an increase in uptake:

1. Nephrosis
2. Severe liver disease
3. Metastatic malignancy
4. Severe pulmonary insufficiency with CO^2 retention
5. Paroxysmal atrial arrythmias
6. Anticoagulants—bishydroxycoumarin, heparin, ethyl biscoumacetate

The T^3 test does not supercede the BMR, PBI, or I^{131} uptake. Each of these procedures has inherent advantages and disadvantages in the evaluation of the patient's thyroid function. If it were possible to screen patients in order to identify those having spurious deviations of the PBI and I^{131} uptake, these procedures might suffice. This is not possible at present, however, and an increasing percentage of people have received substances which alter the results of these tests and thus invalidate them. The administration of organic iodine for radiographic studies exerts little or no effect on the red blood cell uptake of radioiodinated T^3.[3-5, 7]

Conclusions

The advantages of the T^3 uptake test may be summarized as follows:

1. Organic iodine does not impair the accuracy of the test.
2. No radioactive material is given the patient.
3. The procedure requires only one patient visit.
4. There is a high degree of correlation with the clinical impression.
5. The results of thyroid and antithyroid medication can be assessed.

References

1. Paschkis, K. E., and Cantarow, A.: Clinical Endocrinology. Second Edition. Hoeber-Harper, New York, 1958.
2. Meyer, R. Personal communication.
3. Hamolsky, M. W., Goloditz, A., and Freedberg, A. S.: Further studies on use of RBC uptake of 1-triiodothyronine I^{131} as a diagnostic test of thyroid function. J. Clin. Endocrinol. 19:103, 1959.
4. Rohhins, L.: Experience with the in vitro erythrocyte uptake of I^{131}-laheled 1-triiodothyronine in a routine clinical lahoratory. J. Clin. Endocrinol. 19:1292, 1959.
5. Garcia, P. B.: Comparison of red-cell uptake of I^{131}-tagged triiodothyronine and other thyroid function analyses with the clinical evaluation of thyroid function. Med. Ann. D. C. 30(8), 479-481, 1961.
6. McCoy, K. L. Personal communication.
7. Squibh Laboratories Tri-Thyrotope Technical Data Sheet.

Disease Eradication by Cooperation

With the introduction of the sulfonamides and the antibiotics, much security developed in the profession's and in the public's mind. Prior to the antimicrobial era, about 50 per cent of all deaths were due to or associated with infection. Probably syphilis, gonorrhea, and tuberculosis could be eradicated with universal cooperation.—H. Close Hesseltine, M. D., in **Trustee**, April 1962.

The Gynecological Aspects Of the Adrenogenital Syndrome*

• The authors discuss the modern treatment of an intricate subject on which more knowledge has been obtained in the last twelve years.

DAVID L. BARCLAY, M. D.†
JOSEPH F. DINGMAN, M. D.‡
New Orleans

THE adrenogenital syndrome has been defined as that syndrome of hyperfunction of the adrenal gland associated with sexual changes.[1] The etiology may be adrenal hyperplasia or tumor. The clinical manifestations depend principally upon the patient's age rather than the nature of the adrenal lesion. Adrenal dysfunction of this variety may affect either the male or female, however it is less often recognized in the male. This presentation will be concerned with this problem only as it affects the female.

The adrenogenital syndrome has been divided into three clinical groups by age: Congenital adrenal pseudohermaphroditism, prepubertal, and adult forms. This communication will outline and discuss the differential diagnosis and treatment in each of these age groups from the point of view of the gynecologist.

Congenital Adrenal Pseudohermaphroditism

A pseudohermaphrodite is characterized by the presence of gonads of one sex associated with ambiguous genitalia more consistent with the opposite sex. A female pseudohermaphrodite, therefore, would have ovaries in the presence of masculinized external genitalia. A male pseudohermaphrodite would have the opposite arrangement: Testes with feminized external genitalia. A true hermaphrodite, *hermaphroditismus verus,* is endowed with both ovarian and testicular tissue. The final determination of the sex of an individual requires histologic study of the gonads. The necessity for surgical examination of the gonads has been somewhat modified by the discovery of the significance of the nuclear sex chromatin mass by Barr,[2] in 1950. The human female, and some animals, were noted to have a small mass of special chromatin adherent to the inner surface of the nuclear membrane of all body cells. Clinically, it is most easily demonstrated in the nuclei of cells scraped from the buccal mucosa. With the exception of Klinefelter's syndrome, those individuals with gonads of one sex only, were found to have a corresponding sex chromatin pattern. In the presence of elements of both male and female gonads, true hermaphroditism, either sex chromatin pattern could be present. However, cells from most true hermaphrodites demonstrate the presence of a nuclear sex chromatin mass. It was originally presumed that the nuclear sex chromatin mass corresponded with an XX sex chromosome pattern. Recent evidence suggests that the condensation of only one X, perhaps the paternally donated X, is responsible for the nuclear sex chromatin mass. But, from a clinical point of view, the previous assumption is usually valid.

From the work of Jost[3] with animals and the study of human problems of intersex, some tentative conclusions can be drawn about differentiation of the internal and external genitalia. Differentiation

* Presented at the Eighty-second Annual Meeting of the Louisiana State Medical Society, May 9, 1962, Monroe.

† From the Department of Obstetrics & Gynecology, Tulane University School of Medicine.

‡ Director of Medical Research, The Frank H. Lahey Foundation.

Aided by a grant from the Ex-Residents and Fellows Fund.

of the gonads, from a common primordium, appears to be genetically determined. True hermaphrodites are the principal exception.

Development of the internal duct system is determined by the presence or absence of normal testes. The normal testis has a unilateral influence promoting development of the Wolffian duct system and regression of the Mullerian duct system. In the absence of any gonad, or in the presence of a normal ovary, the ipsilateral Mullerian system will develop.

The external genitalia are derived from the genital tubercle and paired scrotolabial folds. Differentiation begins at about the sixth to eighth week of gestation and is influenced only by the presence or absence of androgens. In the absence of androgens there is development of a typical female vulva. Excessive androgens promote varying degrees of fusion of the scrotolabial folds and clitoral enlargement in the female fetus. These androgens may be derived from hyperplasia of the fetal adrenal cortex, or from administration of androgenic substances (or some synthetic progestins) to the mother during the first trimester of pregnancy. One case of virilization of a female newborn was reportedly due to the presence of an androgen producing ovarian tumor of the mother during the first trimester of pregnancy.

The genital abnormalities associated with congenital adrenal pseudohermaphroditism are characteristic. (Figure 1). All genital abnormalities are limited to the external genitalia, derivatives of the urogenital sinus and genital tubercle. Mild cases may demonstrate only slight clitoral enlargement. The most severe degree of the deformity consists of complete fusion of the scrotolabial folds with a markedly enlarged clitoris and in a very rare instance, a phallic urethra. With intermediate degrees of deformity one may often be able to identify a separate vaginal and urethral opening. However, most commonly the urethra and vagina share a common meatus at the base of the clitoris. Cases have often been described where the vagina was thought to enter the urethra.

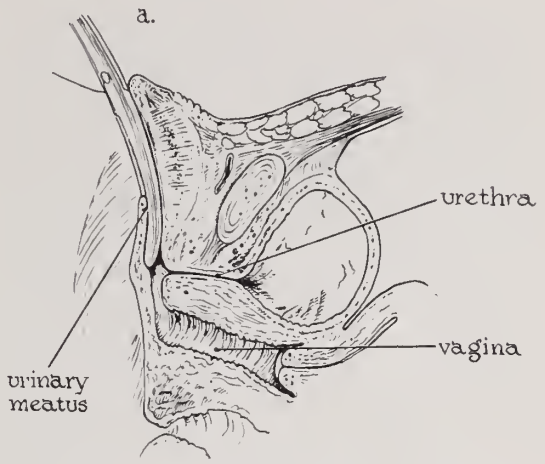


Figure 1. Typical deformity of the genital tubercle and urogenital sinus. The vagina and urethra open through a common meatus.

Strictly speaking, this is not true and it is better to speak of the vagina and urethra as opening into a common persistent urogenital sinus with a meatus at the base of the clitoris. The amount of clitoral hypertrophy often does not correlate with the degree of deformity of the urogenital sinus. Clitoral size appears to depend upon the amount of excessive androgen produced. The degree of urogenital sinus deformity is influenced by the time of onset of excessive androgen production in utero.

In infants the ovaries show no recognizable changes from normal, but in the older, untreated patient, the ovaries become increasingly abnormal. The internal genitalia, derivatives of the Mullerian duct system, are hypoplastic but normal. Iatrogenic genital deformity does not progress.

If this problem remains untreated, pubic hair, acne, and facial hirsutism soon develop. Pubic hair is usually noted by age 2 to 4 followed shortly thereafter by axillary hair. Growth in stature is precocious with an accelerated bone age and early epiphyseal closure. As a result the ultimate stature is short. The development of female secondary sexual characteristics is retarded and menstruation does not occur at puberty.

Only 60 per cent of infants suffering from congenital adrenal hyperplasia have sufficient genital abnormality to be classified as pseudohermaphrodites.[4] These pa-

tients may also present with hypertension, or symptoms of salt wasting, or hypoglycemia. These concomitant abnormalities are estimated to be present in the following percentages: hypertension 7 per cent, salt wasting 33 per cent, and hypoglycemia less than 5 per cent. When the electrolyte regulating function of the adrenal gland is also involved, the clinical manifestations of vomiting, weight loss, dehydration and circulatory collapse may begin within a few weeks of life. If untreated, it may result in death. Hypoglycemia, which is rarely encountered, is apparently due to the defective adrenal cortical synthesis of cortisol, which is the primary defect in this condition.

Pathogenesis of Congenital Adrenal Cortical Hyperplasia

It has been postulated that congenital adrenal cortical hyperplasia is due to a recessive genetic factor producing an enzymatic defect in the adrenal cortex which impairs the synthesis of cortisol from 17-hydroxyprogesterone.[1, 5] The incidence of this disorder has been estimated to be 1 in 5000 live births. Approximately 1 in 35 individuals carries a recessive gene for this condition. The pathology of the adrenal cortex is characterized by marked hyperplasia of the zona reticularis. With age, this area may occupy an increasing proportion of the adrenal gland and in the adult compose 90 per cent of the cortex.[7] The zona fasciculata is very small and this may represent the basic pathologic defect in the adrenal cortex. Ordinarily the pituitary production of adrenocorticotrophin is inhibited by the production of glucocorticoids from the zona fasciculata. However, in this condition, since cortisone production is faulty, the pituitary production of corticotrophin is uninhibited. The excessive corticotrophin bombards the adrenal gland and enhances production of excessive androgenic and estrogenic compounds from the zona reticularis. Patients demonstrating additional metabolic defects in addition to virilization have specific enzymatic defects in addition to the one just described. When more than one case is present in the same family, each individual will demonstrate the same single enzymatic defect or group of enzymatic defects in the adrenal cortex. The excessive production of adrenal androgens is reflected in the urine by an increased excretion of 17-ketosteroids. Pregnatriol and pregnanetriolone excretion are also increased and reflect an excess of 17-hydroxyprogesterone from faulty adrenal cortical metabolism.

Diagnosis

The diagnosis of congenital adrenal cortical hyperplasia is based upon the clinical findings in addition to an increased excretion of 17-ketosteroids and pregnantriol in the urine. Normal female children under one year of age excrete less than 1 mgm. of 17-ketosteroids per twenty-four hours. This excretion rate increases to 2 mgm. per day from age 2 to 8, with a linear increase after age 8 to the adult level of 5 to 12 mgm. per twenty-four hours. The administration of cortisone promptly decreases the 17-ketosteroid excretion to normal when hyperplasia is present as contrasted to the lack of suppression when an adrenal cortical tumor is present.

Anatomical abnormalities in children may be investigated by the use of endoscopy, intravenous pyelography, and radiopaque contrast study of the vagina and bladder. Evaluation of the buccal smear sex chromatin and chromosome studies have been useful for exclusion of other forms of intersex.

Treatment

The treatment of congenital adrenal pseudohermaphroditism consists of a surgical correction of the external genitalia and cortisone administration. In 1950, cortisone was introduced as specific treatment for congenital adrenal hyperplasia.[8] Cortisone afforded replacement therapy for the relative deficiency of cortisone synthesis due to the enzymatic defect in the adrenal cortex. Cortisone or its derivatives will effectively suppress the urinary excretion of 17-ketosteroids. Young infants may be

controlled by the equivalent of 25 mgm. of cortisone per day, administered intramuscularly, which may later be reduced to 8 to 12 mgm. per day for maintenance dosage. If treatment is initiated prior to age 2 the growth and development of the child are less likely to be affected. However, after age two, the child's bone age is usually advanced and some sexual hair has developed, both of which may be limited in progression by treatment, though irreversible. Early treatment will prevent damage to the ovaries and conserve the potential for reproduction.

Surgical revision of the vulva requires opening of the urogenital sinus and a clitorectomy or circumcision (Figure 2).

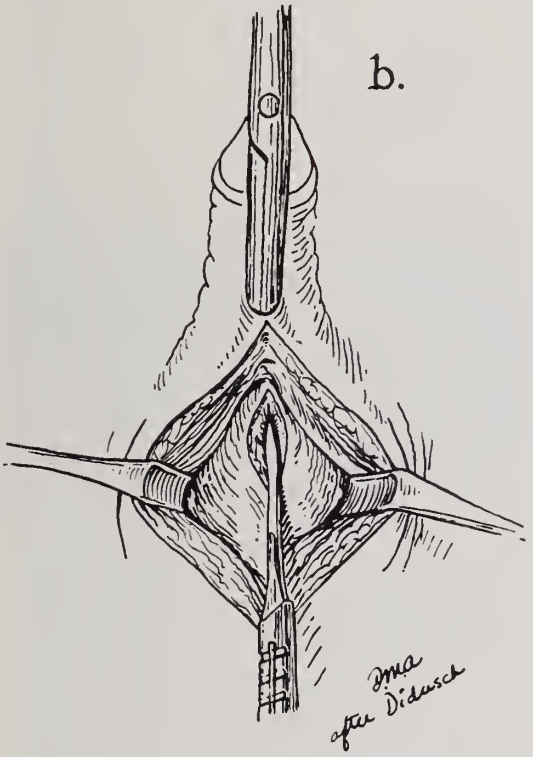


Figure 2. Incision of urogenital membrane.

Usually only simple incision of the urogenital membrane and circumcision is required. Occasionally the body of the clitoris is enlarged in addition to the redundancy of foreskin and therefore complete excision of the clitoris is required. A very thick urogenital membrane complicates the surgical procedure because the urethra can not easily be identified. There is no correlation between the degree of clitoral hypertrophy and the amount of urogenital sinus deformity.

The indications for surgical correction are: urinary tract infection from residual urine in the vaginal pocket and the psychological trauma of abnormal genitalia. Jones and Scott[7] have recommended surgical correction at about age 2½ to 3 years. At this age the child is first beginning to make a sexual identification and assume the corresponding gender role. In addition, the hazard of surgical anesthesia has somewhat decreased at this age.

Materials

We have observed six patients with congenital adrenal pseudohermaphroditism. Two were newborns, three were from age four to six, and one was age eleven. One newborn died at home at six weeks of age, despite cortisone treatment, (possibly of the salt-losing variety of the syndrome). The second infant has responded well to treatment and will have surgery at about three years of age.

The remaining four patients have all been operated, three of whom are presented. The first represents a typical example of the syndrome of congenital adrenal hyperplasia and genital deformity. The results of surgical and medical treatment were satisfactory. The second presented a problem of sexual identification, and a third demonstrated the long term effects of no treatment.

Case Reports

Case No. 1 (S.S.)

This patient was born September 27, 1955, after an uneventful term pregnancy of a primagravida. The mother received no medications during pregnancy. The infant was discharged from the hospital as a normal female. She was seen again in September, 1959, at age four. An enlarged clitoris had been noted by the mother shortly after birth and genital hair had been present for about one year. Urinary tract infections had been treated twice during the previous year. Her bone age was advanced to 7½ years. The appearance of the external genitalia was typical of congenital adrenal pseudohermaphroditism (Figure 3). A urogenital sinus was outlined by cystoscopy, vaginoscopy, and a cystogram. The initial 17-ketosteroid excretion was 10.6 mgm. per twenty-four



Figure 3. Case 1. (S. S.)
A typical genital deformity of female pseudohermaphroditism secondary to congenital adrenal hyperplasia.

hours. Initial treatment consisted of the administration of cortisone which suppressed the 17-ketosteroid excretion to 4.6 mgm. per twenty-four hours. Continued cortisone therapy maintained the 17-ketosteroid excretion below 2 mgm. per twenty-four hours.

On September 12, 1960, one year later, a clitorectomy and incision of the urogenital sinus membrane was performed under general anesthesia. Supplemental cortisone was given for the surgical procedure. One year later the postoperative result was considered to be very good. Hair regrowth was prompt, despite adequate adrenal suppression (Figure 4).



Figure 4. Case 1 (S. S.)
Vulva one year after surgery. Note hair regrowth.

Case No. 2 (B.J.K.)

This patient first received medical attention on October 26, 1954, at one month of age. The infant presented as a male, with gross hematuria and ambiguous external genitalia. A urinary tract infection was diagnosed and it responded well to treatment. An intravenous pyelogram and cystogram were normal and the infant was discharged as a male with a diagnosis of hypospadius, undescended testes, and urinary tract infection. She was readmitted in February, 1955 with a urinary tract infection. Pubic hair growth prompted reevaluation. A laparotomy was performed in November 1956; the internal genitalia were those of a normal female consisting of ovaries, tubes, and a normal uterus. Bilateral ovarian biopsies were consistent with prepubertal ovarian tissue. The diagnosis of congenital adrenal pseudohermaphroditism was established. The bone age was normal; the 17-ketosteroid excretion varied from 1 to 4 mgm. per twenty-four hours. Cortisone therapy was begun and the 17-ketosteroid excretion was suppressed to normal.

She was readmitted to the hospital in February, 1961, at age 5½ years. A characteristic urogenital membrane was incised and the clitoris circumcised (Figure 5). Despite the fact that the



Figure 5. Case 2 (B. J. K.)
Deformity of external genitalia.

clitoris was not markedly enlarged, there was some difficulty locating a separate urethra and vagina due to a very thick urogenital membrane. The postoperative course was uneventful and the surgical result was considered satisfactory (Figure 6).



Figure 6. Case 2 (B.J.K.)
External genitalia one year postoperative.

Case No. 3 (L.E.)

This patient was first admitted to the hospital on October 21, 1960. She was age 10 and was considered to be a male. She was the sixth sibling in the family, and the product of a normal pregnancy and term delivery. There was no history of medication received by the mother during the pregnancy. The other siblings were normal. Development had allegedly been normal until age two at which time she developed pubic and axillary hair. Acne appeared at age four. Her mother was concerned about her genital abnormality, limited her contact with other children, and admitted her to school one year late. However, her school work had been satisfactory and she was promoted each year. She was initially seen at age eight. A clinical diagnosis of pseudohermaphroditism due to congenital adrenal cortical hyperplasia was made at that time. She was not returned for admission to the hospital and further evaluation.



Figure 7. Case 3 (L. E.)
Meatus of urogenital sinus at the base of a hypertrophied clitoris.

Physical examination in October, 1960 revealed a precocious-appearing male. The blood pressure was 170/130. There was a well developed muscular stature, facial and body hair of normal male distribution, acne of the face and acneiform papules over the trunk. The bones appeared short in relation to the trunk. The clitoris was markedly hypertrophied with a fusion of the scrotolabial folds to the base of the clitoris. The scrotolabial folds were very redundant, suggesting a true scrotum, however no testes were palpable. (Figure 7 & 8) A prostate but no uterus was palpable on rectal examination. On panendoscopy the



Figure 8. Case 3 (L. E.)
Typical genital deformity with markedly redundant scrotolabial folds.

urologist noted a prominent verumontanum with a slit-like opening at the apex, considered to be the vagina. A catheter was passed through this opening on the verumontanum and a vaginogram and urethrogram performed. The bone age was markedly advanced with all visible epiphyses closed. The heart was enlarged principally from left ventricular hypertrophy. The buccal smear was chromatin positive and a chromosome study revealed 46 chromosomes with a normal female sex chromosome pattern.

The 17-ketosteroid excretion varied from 25 to 50 mgm. per twenty-four hours. The 17-hydroxycorticoids were elevated to 36 to 42 mgm. per twenty-four hours. Both were well suppressed with cortisone administration.

The consensus was that this child should be raised as a male due to the positive masculine identification. Therefore, on March 29, 1960, after adequate adrenal suppression with cortisone, a total abdominal hysterectomy and bilateral salpingoophorectomy was performed. The vagina was excised as close to the urethra as possible to prevent a pocket for residual urine. Complete excision of the vagina was difficult because excessive excision could produce a urethral fistula.

The child was discharged on maintenance cortisone therapy. Surgical procedures were contemplated to correct the hypospadius.

Discussion

The first patient represents a classic example of congenital adrenal pseudohermaphroditism treated successfully with cortisone and surgical revision of the external genitalia. The clitoris was markedly hypertrophied and required complete excision. The scrotolabial folds were completely fused to the base of the clitoris, however the membrane was thin and required only simple incision. The second case had a much more marked deformity of the urogenital sinus but less hypertrophy of the clitoris, which merely required circumcision. The urogenital membrane was quite thick and afforded some difficulty in finding the separate urethral and vaginal openings. Despite this difficulty the surgical result one year later was considered to be good. As noted previously, this probably implies that the onset of androgen production by the adrenal gland occurred earlier in the second patient, whereas the output of androgen was greater in the first, producing greater enlargement of the clitoris. Ovarian biopsy in the second case reconfirmed the presence of normal ovaries early in this disorder.

The third patient represented the unfortunate circumstance of delayed diagnosis and treatment, which was due to reluctance on the part of the parents of low intelligence to seek medical advice. Because of the firm identification as a male there was no alternative as to treatment. If hysterectomy and bilateral salpingoophorectomy had not been done, menstruation, which would have been interpreted as hematuria, would have occurred after adequate adrenal suppression with cortisone.

Manifestations in the Prepubertal Group

Prepubertal children may present with precocious obesity, excessive muscular development, or a combination of both. They often experience a period of temporary rapid growth and virilization followed by early epiphyseal closure producing ultimately a short adult. Menstruation usually has not occurred in those patients who have reached the age of puberty. The etiology of this syndrome in children is most often a tumor of the adrenal cortex which is frequently malignant. Over 100 cases of the adrenogenital syndrome secondary to adrenal cortical tumor have been reported for this age group.

Whether the etiology is adrenal cortical tumor or hyperplasia, these children often present with findings compatible with a combination of the adrenogenital syndrome and Cushing's syndrome. Because of this frequent association, it is important to do both a 17-ketosteroid and a 17-hydroxycorticoid urinary excretion determination. In the presence of a tumor, the 17-ketosteroid excretion is usually higher than that found with hyperplasia. The excretion of 17-ketosteroid will be suppressed after the administration of cortisone, if adrenal cortical hyperplasia is the etiological factor.

The first patient in this age group was recently encountered. She presented at age 15 with secondary amenorrhea, evidence of virilization, and a Cushingoid appearance. Because of these clinical find-

ings a determination was done for both the 17-ketosteroid and 17-hydroxycorticoid urinary excretion. The former value was 27.2 mgm. per twenty-four hours and the latter 22.6 mgm. per twenty-four hours (both elevated). She is now in the process of evaluation by an endocrinologist to determine the type of adrenal dysfunction responsible.

It is uncertain whether the form of adrenal cortical hyperplasia producing the adrenogenital syndrome in this age group is the same pathologic process as that producing congenital adrenal pseudohermaphroditism in the newborn. It should be emphasized again that the determination of the 17-hydroxycorticoid excretion in addition to a 17-ketosteroid excretion must often be done due to the frequent combination of evidence of virilization and Cushing's syndrome.

The Adrenogenital Syndrome in Adults

Adrenocortical hyperfunction in the adult female may be manifested as the adrenogenital syndrome, Cushing's syndrome, or a combination thereof. Women are most frequently afflicted with this disorder during the second to fourth decades of life and the etiology is most commonly adrenocortical hyperplasia. The first signs of defeminization and virilization are usually hirsutism of the face, legs, and abdomen, with a male type distribution. The hair may be fine or coarse and stiff. Usually there is a coincident menstrual disturbance from anovulatory menstruation. Complete amenorrhea may ultimately ensue. Clitoral hypertrophy and deepening of the voice may occur with more pronounced virilization. Acne of the face or back is often a disturbing problem.

Patients of this general variety, however, do not present as a homogenous group; hirsutism without menstrual disturbance or the opposite is not infrequent. An occasional patient will present with marked hirsutism but no infertility problem. Another large group is disturbed by anovulatory menses only, with no evidence of defeminization or virilization.

Etiology

The principal causes of virilization and menstrual disturbance are as follows: adult adrenocortical hyperplasia, adrenocortical tumor, idiopathic hirsutism, and the Stein-Leventhal, or "polycystic ovary syndrome." Some investigators believe that manifestations of adrenocortical hyperplasia, producing only excessive amounts of androgens, on occasion, may not become apparent until after puberty. This conclusion was based upon the fact that some patients with irregular menses and evidence of virilization demonstrated biochemical findings similar to those found in the congenital form of the disorder.[10] The successful use of cortisone for the treatment of congenital adrenal cortical hyperplasia prompted its use in adults for the treatment of problems of anovulatory menses and mild virilization, with or without elevated urinary 17-ketosteroid excretion values. Promising clinical results and a decreased 17-ketosteroid excretion with low dosage cortisone suggested adrenal hyperfunction as the etiology of this problem.[11] Zener[12] used the term, "adrenal adrenergic hyperfunction" for this borderline syndrome of adrenal hyperfunction. He also suggested that the upper limit of urinary 17-ketosteroid excretion for adult women should be not more that 11 mgm. per twenty-four hours. Patients with a normal 17-ketosteroid excretion were considered to have a shift in the components of the 17-ketosteroids which produced signs of virilization without an elevated excretion value. Gold, et al.,[13] reported an increased "pregnane complex" in the urine of these patients which is typical of congenital adrenocortical hyperplasia.

Hermann[14] questioned the validity of the concept of a mild adrenocortical hyperplasia with normal or borderline elevation of the 17-ketosteroid excretion values. His group of patients of this type were found to have an elevated excretion of androsterone, but a normal excretion of pregnanetriol and a normal response to ACTH administration. The latter two findings were contrary to those expected

in typical congenital adrenocortical hyperplasia. He also noted that cortisone depressed the output of 17-ketosteroids by the normal patient. Cortisone suppression of 17-ketosteroid excretion could therefore not constitute a valid test for adrenal hyperfunction in this group of patients.

Tumors of the adrenal cortex causing virilization are uncommon, however they must be excluded in each case studied. The excretion of 17-ketosteroids is usually much higher in the presence of a tumor as contrasted to adrenocortical hyperplasia. A tumor may produce pure virilization or also evidence of Cushing's syndrome.

The etiology of idiopathic hirsutism without menstrual irregularity is unclear. Evidence has been presented that it is of adrenal origin but a disturbance of the adrenal cortex unlike that found in typical congenital adrenal hyperplasia.[15] It would appear that many instances are related to the genetic background and end organ responsiveness of the individual.

The principal problem of differential diagnosis in the somewhat virilized anovulatory patient is the polycystic ovary syndrome, as described by Stein and Leventhal, in 1935.[16] The syndrome originally described by them consisted of hirsutism, obesity, amenorrhea, or menstrual irregularity, and infertility. The ovaries were typically white, polycystic, and enlarged three to four times normal size, with a thickened fibrotic tunica. Wedge resection with removal of one-half to three-quarters of the substance of each ovary was effective treatment to initiate regular ovulatory menstruation. With the initial use of cortisone for these virilizing syndromes it was thought that the Stein-Leventhal syndrome might be of adrenal origin and therefore respond to cortisone therapy.[17] However, Jones found that one ovulation could often be stimulated, but no prolonged beneficial effect was noted.[15]

Recent reports have emphasized that these patients may manifest minimal signs of virilization. The ovaries need to be little enlarged, but characteristically polycystic.[18, 19] Current research has demonstrated the ovary to be a site of androgen production and that the polycystic ovary has the capacity to synthesize increased amounts of androgenic compounds.[20, 21] Hermann[14] found the hirsute and amenorrheic patient with polycystic ovaries to have a significantly elevated output of androsterone which decreased after bilateral ovarian wedge resection; the total amount of excess of androsterone was not enough to often elevate the total 17-ketosteroid excretion.

Diagnosis

The differential diagnosis of the virilized patient with menstrual irregularity is based upon clinical and laboratory findings. The initial history and physical examination will usually detect signs and symptoms of Cushing's syndrome. The presence of this syndrome may be confirmed or excluded by a determination of the urinary 17-hydroxycorticoid excretion value. If evidence of Cushing's syndrome is present, adrenal cortical hyperplasia or tumor may be responsible. A description of the diagnostic procedures used for Cushing's syndrome is beyond the scope of this paper.

Those patients manifesting only androgenic hyperfunction are further evaluated by obtaining skull films for evidence of enlargement of the sella turcica and a determination of the 17-ketosteroid urinary excretion. A low 17-ketosteroid value usually indicates a problem of nonadrenal virilization. Although idiopathic hirsutism may be of adrenal origin it is usually not reflected by an increased excretion of 17-ketosteroids in the urine.

Signs of virilization without an elevation of the urinary titer of 17-ketosteroids, suggests the ovary as the site of the pathology. The ovarian pathology may consist of diffuse polycystic change and thickening of the tunica or a functional neoplasm. A hilar cell tumor of the ovary may be associated with an elevated urinary titer of 17-ketosteroids, but this is uncommon. Rarely adrenal rest tumors of the ovary have produced a combined problem of virilization and features of Cushing's syndrome. In general, ovarian enlargement in

association with evidence of virilization and a normal 17-ketosteroid value, indicates surgical evaluation of the ovaries. Initial success with cortisone treatment of the polycystic ovaries syndrome was promising. However, it is becoming increasingly apparent that the polycystic ovary is stimulated to ovulate only temporarily by cortisone administration.

An elevated 17-ketosteroid urinary titer is usually pathognomonic of adrenal hyperfunction, either cortical hyperplasia or tumor. The 17-ketosteroid excretion is usually much higher in the presence of a tumor. An adrenocortical tumor is excluded by performance of an adrenocortical suppression test. The equivalent of 100 mgm. of cortisone is given each day by mouth for a week and a repeat 17-ketosteroid determination done. If the 17-ketosteroid value is not suppressed, an adrenocortical tumor must be excluded. Those patients with adrenogenic adrenocortical hyperplasia will have a sharp decrease in the 17-ketosteroid urinary excretion after cortisone administration. Those patients suspected of having an adrenocortical tumor must be further evaluated by laboratory and x-ray diagnostic procedures. Discussion of these diagnostic procedures will not be presented.

An occasional patient with either Cushing's syndrome or the adrenogenital syndrome may also have polycystic ovaries. Wedge resection alone is of no benefit to these patients. The primary adrenal dysfunction must be treated in conjunction with ovarian wedge resection to initiate ovulatory menstruation.

Treatment

The treatment of adult patients afflicted with a virilizing syndrome is dictated by the basic pathologic process producing these changes. The principal etiologies as previously enumerated are as follows: adult adrenocortical hyperplasia, adrenocortical tumor, idiopathic hirsutism, and the Stein-Leventhal, or "polycystic ovary syndrome".

Adrenocortical hyperplasis in the adult is treated the same as that of the congenital variety. An initial dose of 100 mgm. of cortisone by mouth per day should decrease the 17-ketosteroid excretion to normal levels. This dosage is maintained for approximately ten days after which it is decreased to the equivalent of 25 to 50 mgm. of cortisone by mouth per day in divided doses for maintenance. The dosage is determined by the efficiency with which the 17-ketosteroid excretion is maintained at a low level. Our preference for therapy has been prednisone® which has approximately five times the potency of cortisone and has less effect on salt retention than does cortisone. Although menstrual irregularity may respond promptly to this treatment schedule, the results with hirsutism are disappointing. The rate of growth and the texture of the hair may be altered, however the hair cannot be completely eliminated.

Removal of adrenocortical tumors, which are usually benign adenomas in this age group, produces a dramatic and prompt improvement of symptoms. Tumors associated with a combined syndrome of virilization and Cushing's syndrome introduce additional complications to surgical removal. The contralateral adrenal cortex has often been suppressed by the relative adrenal hyperfunction produced by the tumor.

The therapy of idiopathic hirsutism not associated with menstrual irregularity is not satisfactory. Cortisone may be of value in some cases, but significant improvement is uncommon.

Virilizing syndromes originating from ovarian lesions require surgical intervention. Virilizing ovarian tumors obviously require surgical removal. They are uncommonly malignant and therefore the child-bearing function may often be conserved. This, of course, is dictated by the extent of the disease. Wedge resection of the polycystic ovary is of proven value in the treatment of the polycystic ovary syndrome. Evidence is accumulating that a polycystic ovary does not need to be markedly enlarged to produce signs of virilization and menstrual abnormality. Although

initially promising, cortisone has not proved to be satisfactory treatment for this syndrome. As previously noted, some patients require both ovarian wedge resection and treatment of their concurrent adrenal hyperfunction to initiate ovulatory menstruation. Menstrual function is promptly improved after ovarian wedge resection. Hirsutism, here again, is little improved.

Materials

During the last two years we have studied and attempted to categorize 47 patients who presented with evidence of virilization and menstrual disturbance. Twenty have not had a definite diagnosis as yet, and most of these are receiving a trial of cortisone adrenal suppression. Twelve were diagnosed as having the polycystic syndrome and nine of these have been confirmed by wedge resection. Only two received primary ovarian wedge resection without a trial of cortisone therapy. The ovaries of two were enlarged to two to three times normal size, but impalpable due to the patient's obesity. The remainder were less than two times enlarged. Cortisone often initiated menses for these women but was only effective for one or two cycles. None had a 17-ketosteroid excretion above 12 mgm. per twenty-four hours. All of the patients operated upon have had the diagnosis confirmed microscopically and had postoperative ovulatory menses. Hirsutism if present preoperatively was little improved by the operative procedure.

Thirteen patients have been classified as having hyperfunction of the adrenal cortex and treated with cortisone. All except one has had a 17-ketosteroid excretion of 17 to 49 mgm. per twenty-four hours. The exceptional patient presented at age 18 with primary amenorrhea and mild virilization. The 17-ketosteroid excretion was 12 mgm. per twenty-four hours and when suppressed with cortisone, menstruation was promptly induced. Eight of these patients have been followed sufficiently long, with good response to cortisone, to suggest a true adrenal hyperfunction. Two patients received wedge resection in addition to continued cortisone therapy to initiate ovulatory menses. The first was treated with cortisone for one year and menstruated irregularly, however, ovulation was not induced. Infertility was her primary presenting complaint, and therefore a surgical procedure was considered indicated. An ovarian wedge resection and continued cortisone therapy initiated ovulation. She was last seen in April, 1962, at which time she was approximately ten weeks pregnant. The second patient received ovarian wedge resection at the time of emergency surgery for a ruptured corpus hemorrhagicum. It is of interest that both of these patients stopped menstruating completely with cessation of cortisone therapy after wedge resection, but both responded well to resumed cortisone treatment. A third patient was initially seen after wedge resection of normal ovaries for a presumed Stein-Leventhal syndrome. The 17-ketosteroid excretion value was 18 mgm. per twenty-four hours. We have just recently begun cortisone therapy and initiated the menstrual function. Two college girls complained principally of acne and facial hirsutism with little concern about irregular menses. Two patients had quite marked generalized hirsutism, but ovulated frequently enough for repeated pregnancies, suggesting an adrenal disorder at variance with typical adrenocortical hyperplasia.

Two of the twenty unclassified patients are age 16 and presented with intermittant amenorrhea and evidence of mild virilization. The 17-ketosteroid excretion was low and both have easily palpable ovaries. One has suggestive clitoral hypertrophy. We hope to delay surgical intervention until marriage and pregnancy are contemplated. Progressive virilization may necessitate ovarian wedge resection prior to that time. One virilizing ovarian tumor and one instance of diffuse stromal luteinization were also encountered in this series of 47 patients.

Discussion

We have attempted to differentiate these entities by determination of the 17-ketosteroid excretion level and evaluation of the response to low dosage cortisone therapy. Those patients who presented with only hirsutism but no menstrual irregularity or infertility were excluded from consideration by us. Those patients with enlarged ovaries and a low 17-ketosteroid excretion, less than 6 to 8 mgm. per twenty-four hours, were subjected to colpotomy for inspection of the ovaries and wedge resection if the ovaries were grossly polycystic. If a patient was too obese for adequate pelvic examination and evaluation of the ovaries, the ovaries were inspected by colpotomy or laparotomy.

If the 17-ketosteroid excretion was elevated or at the upper limits of normal, greater than 8 to 10 mgm. per twenty-four hours, regardless of ovarian size, a cortisone suppression test was done with 20 to 30 mgm. of prednisone® administered by mouth for ten days. A repeat 17-ketosteroid determination was then done. If the 17-ketosteroid excretion value was not decreased an adrenal tumor had to be considered. Adrenal suppression was maintained for three to six months with a maintenance dose of 10 to 20 mgm. of prednisone® per day, given by mouth. If ovulatory menses were not initiated a colpotomy for ovarian inspection and wedge resection was done. If polycystic ovaries were found, each ovary was bisected to the hilum with the removal of about one-half of the total ovarian substance.

Complications from prednisone® therapy have been minimal. Each patient has been screened with a chest x-ray. The initial dose of 30 mgm. of prednisone® may produce a temporary depressive mental reaction infrequently. The maintenance dose of 5 to 10 mgm. of prednisone® per day has been tolerated well. With long term therapy there may be a tendency to gradual weight gain.

Summary

The adrenogenital syndrome has been defined. The syndrome has been discussed in regard to three age groups due to the clinical manifestations peculiar to each. The clinical characteristics, etiology, diagnosis and treatment of each division has been outlined. Only the gynecologic treatment has been stressed.

The gynecologist is concerned with the surgical procedure necessary for correction of the genitalia of female pseudohermaphrodites secondary to adrenal hyperfunction. The necessity of early diagnosis and treatment of the newborn with ambiguous genitalia has been emphasized.

Adrenal hyperfunction in the prepubertal female may first present as primary amenorrhea or precocious development. Combined androgenic and glucocorticoid hyperfunction of the adrenal cortex must be considered in each patient in this age group.

A diagnostic approach to the adult female with evidence of virulization and menstrual disturbance was outlined. Adrenal hyperfunction and the "polycystic ovary syndrome" appeared to be distinct entities requiring specific treatment.

Acknowledgements

Our thanks to the following for editorial assistance: Conrad G. Collins, M. D., Professor & Chairman, Department of Obstetrics & Gynecology, Tulane University School of Medicine and Isadore Dyer, M. D., Professor of Obstetrics, Tulane University School of Medicine.

References

1. Soffer, L. J., Dorfman, R. I., and Gabrilove, J. L.: The Human Adrenal Gland. Lea & Febiger, 1961.
2. Barr, M.: Sex Chromatin and Phenotype in Man. Science 130:679, 1959.
3. Jost, A.: Problems of Fetal Endocrinology: The Gonadal and Hypophyseal Hormones. Rec. Prog. Hormone Res. 8:379, 1953.
4. Blizzard, R. M. and Wilkins, L.: Present Concepts of Steroid Therapy in Virilizing Adrenal Hyperplasia. Arch. Int. Med. 100:728, 1957.
5. Wilkins, L.: Adrenogenital Syndrome due to Enzymatic Defects in Cortisone Synthesis. The Am. J. of Clin. Nutrition 9:661, 1961.
6. Proder, A.: Incidence of Congenital Adrenogenital Syndrome. Helvet. Pediat. Acta. 13:426, 1958.
7. Jones, Howard W., Jr. and Scott, W. W.: Hermaphroditism, Genital Anomalies. Williams and Wilkins, Baltimore, 1958.
8. Wilkins, L., Lewis, R. A., Klein, R., Gardner, L. I., Crigler, J. F., Jr., Rosenberg, E. and Migein, C. J.: Treatment of Congenital Adrenal Hyperplasia with Cortisone. J. Clin. Endocrin. 11:1, 1951.
9. Scarpa-Smith, C., Thorton, H., Caffery, E. L. and

Greenblatt, R. B.: Virilizing Adrenal Tumors in Children. Am. J. Dis. Child. 97:78, 1959.

10. Brooks, R. V. and Prunty, F. T. G.: Patterns of Steroid Excretion in Three Types of Postpubertal Hirsutism. J. Endocrin. 21:263, 1960.

11. Jefferies, W. McK.: Further Experience with Small Doses of Cortisone and Related Steroids in Infertility Associated with Ovarian Dysfunction. Fertil. and Steril. 11:100, 1960.

12. Zener, F. B.: Adrenal Androgenic Hyperfunction and Infertility. Fertil. and Steril. 12:25, 1961.

13. Gold, J. J. and Frank, R: The Borderline Adrenogenital Syndrome: An Intermediate Entity. Am. J. Obst. & Gynec. 75:1034, 1958.

14. Herrmann, W., Fillmore, B., and Morris, J. McL.: The Problem of "Mild" Adrenal Hyperplasia. Fertil. and Steril. 11:74, 1960.

15. Jones, H. W.: Comments. Ob. & Gyn. Survey 13: 694, 1958.

16. Stein, I. F. and Leventhal, M. L.: Amenorrhea Associated with Bilateral Polycystic Ovaries. Am. J. Obst. & Gynec. 29:181, 1935.

17. Jones, G. E. S., Jones, H. W. and Langford, H.: The Use of Cortisone in Follicular Phase Disturbances. Fertil. and Steril. 4:49, 1953.

18. Epstein, J. A. and Kupperman, H. S.: Diagnosis and Results of Therapy of Ovarian Tunica Fibrosa with Cystic Changes. Am. J. Obst. & Gynec. 82:343, 1961.

19. Blewett, E. B.: A Critique of the Stein-Leventhal Syndrome. Am. J. Obst. & Gynec. 81:351, 1961.

20. Warren, J. C. and Salhanick, H. A.: Steroid Biosynthesis in the Human Ovary. J. of Clin. Endocrin. and Metab. XXI:1218, 1961.

21. Lanthier, A. and Sandor, T.: The in Vitro Biosynthesis of Androgenic Steroids by Human Normal and "Stein-Leventhal Type" Ovarian Slices. Acta Endocrinologica 39, 1962.

Discussion

Dr. B. H. Texada, Jr., (Alexandria): Any newborn infant having an intersexual abnormality of the external genitalia should have a sex chomatin test of amnionic fluid cells or buccal mucosal cells. Correct diagnosis in the case of abnormal phenotypes may be arrived at by ascertaining whether or not the mother received progestational agents during pregnancy, determining 17 keto-steroids and if necessary by various diagnostic procedures, including laparotomy.

Once genetic differentiation is made, early therapy may permit the child to develop both emotionally and physically within a proper phenotype. When a chromosomal abnormality is present no successful method of treatment is available, though much can be done to assist these unfortunate patients.

I feel that the information Dr. Barclay has presented in such a logical and concise manner, today, is invaluable to any physicians who *attempt* to care for patients with complaints of menstrual irregularity and/or infertility. So frequently these patients present with a past history of having taken several gross of hormones, having had D & C's on various occasions and a present history of the same original problem. Many of these patients, and especially those with secondary amenorrhea, varying degrees of hirsutism and infertility, deserve a thorough investigation. Our workup of these patients routinely includes a 17 keto-steroid determination. We have concluded that upper limit of normal is 10-12 mg. per day. Patients with elevated 17 keto-steroid have been placed on 10 mgm. of prednisone daily for a period of twenty-eight days, then 5 mgm. daily thereafter. Any patients with normal 17 keto-steroid values or patients with borderline values which fail to respond to cortisone are given the benefit of laparotomy and bilateral ovarian wedge section regardless of the size of the ovaries. Thus far we have not been disappointed by use of this routine.

I was interested in Dr. Barclay's mention of a possible close relationship between ovarian and adrenal function and the suggestion that corticoids are effective therapeutic agents in cases of ovarian dysfunction. I am aware of one author whose sole management of 57 women with a primary complaint of infertility was the administration of prednisone. Forty of these conceived at least once. I cannot comment on this phenomenon at the present time.

"Protecting" the Consumer

Mr. Kennedy wants Federal bureaucrats to have power to forbid the sale, not merely of unsafe drugs, but of drugs that **they** decide are "ineffective" or "worthless". This would not only ruin firms, but prevent the very clinical experience by which the relative merits of new drugs must be tested. Is this "protecting" the consumer? And would the principle be extended to allow bureaucrats to forbid the sale of "ineffective" or "worthless" paintings, newspapers, magazines, or books?—Henry Hazlitt in **Newsweek**, April 2 ,1962.

Arnold's Nerve Reflex; A Little Known Cause of Cough in Pediatric Patients

• An obscure cause of cough in the absence of upper respiratory disease is given with two case reports.

F. MICHAEL SMITH, JR., M.D.*
Thibodaux

ONE of the most trying symptoms in pediatric practice to both parents and physicians is that of cough. Many times we, physicians, have been told our cough medicine did no good.

Etiology

To intelligently treat a cough, one needs to ascertain, if possible, the etiology of a cough. Fortunately for the physician the vast majority of coughs in the pediatric patient, are those associated with the common upper respiratory infection which is self limited and obvious to diagnose.

However, occasionally one may be quite perplexed to diagnose the cause of some coughs in which no respiratory tract disease can be found. The purpose of this paper is to point out one such cause in the pediatric patient that is of extrarespiratory nature.

Merkel, in 1957, stated: "Irritation of the posterior canal walls of the ear can produce signs of vagal irritation such as cough, giddiness, vomiting and syncope."[1]

In our practice, we only recently became aware of cough due to stimulation of the aural canal, when we encountered two male children ages 8 and 4 years, who gave identical histories of a troublesome peculiar gag type of cough. The cough was periodic, spasmodic, and primarily nocturnal. Each individual cough is initiated by a gag almost the same as seen when a tongue blade is introduced into the throat too deeply. This cycle is repeated over and over throughout the night with the results of no sleep for parent or child. Upon physical examination of these two children it was noted that when the otoscope ear speculum was introduced into the auditory canal for the purpose of examining the ears that this gag-cough cycle could be triggered at will.

Clerf in 1947, had clearly stated this phenomena as follows: "There may be extrarespiratory causes of cough. The so-called 'ear cough' or 'reflex aural cough' can be provoked at will by irritating the external auditory canal. This results in stimulation of Arnold's nerve, the auricular branch of the pneumogastric. Cough may be a symptom of impacted cerumen. It is important therefore to examine the ears when investigating a case where complaint is made of cough alone."[2]

Literature

When one begins a search of medical literature in reference to "Arnold's Nerve Reflex"; one is at once impressed with the paucity of printed information on this subject. However, in "bull session discussions" with various otolaryngologists, they all tend to indicate that this reflex is not at all uncommon in their patients. Of historical note is the following memorandum submitted to the British Medical Journal in 1928 by a Dr. William P. Kennedy.

"I treated the captain of a vessel, in which I sailed to Japan as a ship's surgeon, at Yokohama Hospital (where then patients were allowed to have their own medical adviser to treat them) for a serious attack of bronchitis, and only consented to take him home if he strictly obeyed my orders."

"He had a raucous voice, and, sailor like, did

* The Children's Clinic, Thibodeaux, Louisiana.

not mince matters when he wanted to cough; his energetic hacks must have dislodged the foreign body from its bed, which allowed it some play, for it caused a superficial ulceration."

"I told him that his bronchitis was well, and that his hacking cough must be due to some reflex irritation. It astounded him to conceive that his ear should have anything to do with the cough; but on removing the body, which I found to be a grain of old dry rice (encapsuled), he proffered the remark, 'it must have been there since the day I got married'; his eldest son was then 35 years of age. It impressed him greatly that from the moment of its removal the cough vanished and never returned again."

"I sifted the matter as well as I could, and had no doubt that the foreign body was there for at least thirty-six or thirty-seven years."

Apparently from the literature the existence of the "Arnold's Nerve Reflex" or "Ear cough reflex" has been known for some time. We were unable to find any figures as to the exact incidence of this reflex. Whereas, it certainly is not common, it does not appear to be too uncommon. A "guesstimation" on our part would be that approximately one in each six to eight hundred individuals will exhibit the Arnold's Nerve Reflex. This response is certainly an easy one to elicit. All one need do is introduce a foreign body such as an ear speculum in the external auditory canal and with a slight wiggling motion a gag-cough reflex will be introduced. Now not all individuals who have the "Arnold's Nerve Reflex", will be troubled with cough. One would conclude from what previous literature is available on this subject that only those who have foreign body, impacted cerumen, or eczema of the canal will exhibit the symptom of cough.

Case Reports

However, in our two cases we have found two children who have periodic gag-cough episodes and in whom there is no demonstrable pathology in the ear. When this reflex was demonstrated to the parents and the gag-cough cycle was evoked, both mothers stated that this was the exact type of gag-cough that the child experienced at home. History also revealed that during episodes of U.R.I. this same type of gag-cough was present.

Summary

The purpose of this paper is to point out again the already known "Arnold's nerve reflex" which can be an extrarespiratory cause of cough and to point out further that this may be more common than one would expect. Also, we should like to postulate that some factor other than foreign body, wax in the ear, or external stimulation of the auditory canal may trigger individuals with the "Arnold's Nerve reflex" to have gag-cough cycles.

References

1. Merkel, Byron M.: Foreign Bodies in the Ear Canal. Journal of Iowa State Medical Society 47:744 (Dec.) 1957.

2. Clerf, Louis H.: Cough as a Symptom, Med. Clinics of North America, 31:1393 (Nov.) 1947.

3. Memorandum--Kennedy, W. P.: The British Medical Journal 3496:14, (Jan.) 1928.

Uniformity in State Drug Laws

If the city of New York were to attempt to regulate drugs in county-wide channels of commerce, and other cities and states were to follow this example, a chaos of conflicting local and state requirements would be imposed on drug manufacturers throughout the country. This would be reflected in the cost of the drugs to the users. It would burden the industry in such a way as to make trade practically impossible. For many years we have supported efforts to achieve uniformity of food and drug legislation so as to give the consumer the greatest benefit of all advances and impose the least burden on industry. — Leona Baumgartner, M.D., New York City Health Commissioner, to House Interstate and Foreign Commerce Committee, May 17, 1962.

Premenstrual Syndrome Result of Prophylactic Treatment With Cytran* (Upjohn**)

• A subject of interest, affecting many menstruating women, is discussed and a prophylaxis offered.

HARRY MEYER, M. D.
New Orleans

PREMENSTRUAL Syndrome comprises a group of symptoms, chiefly emotional, affecting 50-75 per cent of all menstruating women. Tendency and severity seem to increase with advancing age. The pathophysiology involves autonomic and vasomotor instability, sodium and water retention, excessive unopposed circulating estrogens, and deficient pregnanediol excretion.

This syndrome was first described over thirty years ago, and since, has been the subject of extensive interest and study.

Description

The average patient experiences mild to moderate discomforts any time within ten to fourteen days of the next menstrual period. Generally, four to seven days premenstrually, the victim will note a varied combination of irritability, depression, headache, mastalgia, extremity puffiness, and bloatedness. Fluid retention may produce a temporary increase in body weight of 5-10 lbs. Many patients, unless specifically questioned, are reluctant to describe these symptoms, since they consider the discomforts to be a natural phase of the "curse".

Some women are affected to an extreme, and occasionally dangerous degree, due to marked irritability, uncontrollable fits of temper, and serious errors in judgment. Dalton[1] has pointed out that accident proneness increases to an alarming degree, and that 28.5 per cent of accidents of any one type occur within four days of the onset of menstruation, whereas 52 per cent of all accidents occur within an eight day period premenstrually. Even more startling is the information published by Cooke,[2] who found that most crimes by women (in Paris) occurred in the premenstrual period, and by Morton,[3] who noted that 62 per cent of all crimes of violence, committed by women, took place within the premenstrual week.

In the evaluation of the syndrome, as well as the effects of therapy, Perr[4] has proposed that the discomforts may be correlated with the physical and emotional stability of the individual patient. Certainly, neurotics may be expected to number among the more severe victims of premenstrual distress.

As a result of the incidence and disability associated with Premenstrual Syndrome, various forms of treatment have been attempted. In the past, therapy has been directed toward tranquillization, dehydration, or hormone balance correction, or combinations of these.

The introduction of Cytran, in 1960, offered an interesting combination of therapeutic ingredients for the overall attack on the pathophysiology of the syndrome. After having had singular success in the relief of premenstrual distress in a num-

* Cytran: each tablet contains:

Provera (medroxyprogesterone acetate)	2.5 mg.
Cardrase (ethoxzolamide)	35.0 mg.
Levanil (ectylurea)	300.0 mg.

** This study was made possible by a grant from the Upjohn Co., who also supplied the Cytran tablets.

Appreciation is expressed to Dr. A. R. Singleton, Bogalusa, La., for clinical assistance in this project, and to Mrs. Else Pedersen, for technical assistance.

ber of private patients, it was decided to conduct a study to determine the following:

1. If Cytran is of prophylactic value, and can *prevent* the occurrence of the usual premenstrual discomforts.
2. If the progestational agent present (Provera) would disturb a previously normal menstrual pattern.
3. If the Provera would benefit menstrual abberations (oligomenorrhea, hypomenorrhea, or hypermenorrhea) when associated with premenstrual distress.

Clinical Material

In the interest of expediency, reliability, and patient control, it was decided that patients for this study would come from the author's private practice. A safety factor was thereby added, since those patients having any menstrual abnormality, had been studied previously and periodically, to the exclusion of serious anatomical or physiological abnormalities.

Questionnaires were mailed to over 200 patients. Response was good, and those patients actually "suffering" from premenstrual discomforts were asked to present themselves for discussion. The regular occurrence of the syndrome was thereby established, and treatment described. Those patients who were interested were advised that they would be given, at no charge, a supply of medication monthly, with written instructions as to how and when to take the Cytran, for three consecutive months. No charge was made for any patient in this series for consultation, evaluation, or treatment, and each patient understood the nature of the study being conducted.

Method

Each patient was given a bottle of 20 Cytran tablets, and written instructions. Therapy was timed to begin at least *two to three days before* the usual appearance of *any premenstrual discomfort*, and was to be discontinued with the onset of the period. The usual duration of medication was seven to ten days. Patients were advised to expect some degree of tranquillization, but to report any degree of drowsiness. They were also told to expect some degree of diuresis, a feeling of tingling or numbness, and a peculiar taste of any carbonated beverage, all due to the diuretic agent, Cardrase. Except for diuresis, these side effects are temporary and relatively insignificant.

The usual dose of Cytran recommended was one tablet after breakfast, and after lunch. In small patients (90-115 lbs.), or if unpleasant side effects occurred, it was suggested that one half tablet doses be taken 2 to 4 times daily.

Each patient was asked to return postmenstrually for evaluation of therapy, and an additional supply of Cytran. Patient enthusiasm increased progressively, since the prophylactic benefits proved to be encouraging.

All side effects disappeared when the dose was decreased, and usually failed to reappear in subsequent courses, even when the original dose was resumed.

Supplementary Clinical Material and Results

In addition to the 73 private patients in the author's series, 15 private patients were evaluated and treated by another physician, in a like manner. In 11 patients (73.3 per cent), results were "good", with complete prevention of all premenstrual discomforts. Partial ("fair") relief was reported by 3 patients (20 per cent), who stated that Cytran was no better than several previous forms of treatment. One patient (6.7 per cent) discontinued her medication, due to mild side effects.

Conclusions

After many years of interest and experience in the diagnosis and treatment of Premenstrual Syndrome, several facts have become apparent:

The syndrome affects a high percentage of women, many of whom consider it a natural phase of the menstrual process.

2. The abnormal psychological aspects of the syndrome exert an undesira-

TABLE 1
RESULTS
Investigation

	Mild-moderate	Severe	Number	Per Cent
1. Total patients studied (author's series)			73	
2. Age distribution:				
20-29 yrs.			15	20.5
30-39 yrs.			41	56.2
40 and over			17	23.3
3. Degree of premenstrual discomfort:				
Mild to moderate			39	53.4
Severe			34	46.6
4. Premenstrual symptoms:				
Irritability	40	31	71	97.2
Bloatedness	38	17	55	75.3
Mastalgia	33	14	47	64.3
Depression	31	11	42	57.5
Headaches	27	12	39	53.4
Lower abdominal cramps	24	5	29	39.9
Puffiness of extremities	19	4	23	31.5
5. Menstrual pattern:				
Normal			41	56.1
Oligomenorrhea (cycles 35-52 days)			9	12.3
Hypomenorrhea			14	19.1
Hypermenorrhea			18	24.6

TABLE 2
PROPHYLACTIC EFFECT OF CYTRAN

	No.	Per Cent
1. Symptoms:		
a. Good results (prevention of usual discomforts)	52	71.2
b. Fair results (prevention of most discomforts)	11	15.0
c. Poor results (discomforts unaffected)	7	9.5
d. Inconclusive (patient contact lost)	3	4.1

TABLE 3
THERAPEUTIC EFFECT ON MENSTRUAL PATTERN

		Result	No.	Per Cent
1. Customarily normal menstruation	41	No adverse effect	41	100.0
2. Oligomenorrhea (cycles 35-52 days)	9	27-32 day cycles	8	89.0
		No change	1	11.0
3. Hypomenorrhea	14	Normal flow	9	64.3
		Slight improvement	1	7.1
		No effect	1	14.3
		Inconclusive	2	14.3
4. Hypermenorrhea	18	Normal flow	15	83.3
		Slight improvement	1	5.6
		No effect	1	5.6
		Inconclusive	1	5.6

TABLE 4

	No.	Per cent
Side effects of Cytran:		
Nausea	4	5.4
Drowsiness	14	19.1
Jitters	4	5.4
Tingling	3	4.1

ble effect on the patient, and her family. Occasionally, the condition may assume dangerous proportions.

3. The average victim of premenstrual distress suffers four to seven days, but possibly as long as ten to fourteen days prior to the onset of the period.
4. Treatment, directed toward the basic pathophysiology, usually relieves the discomforts. It has been determined in this study that when used prophylactically, Cytran prevented the development of premenstrual symptoms in 71.6 per cent of the total series of 88 patients.
5. In this project, the result of treatment has been based on the personal evaluation of each individual patient. This report therefore, may be termed "pseudoscientific", since it includes no "control" series for comparison. It is reasonable to conclude however, that any form of therapy which is definitely helpful, in the opinion of the patient, is sufficient evidence of efficacy, especially where emotional health is concerned.

Summary

1. A total of 88 private patients, victims of Premenstrual Syndrome, were treated prophylactically with Cytran.
2. Good prophylactic results occurred in 71.6 per cent of the group.
3. Normal menstruation was unaffected by the progestational component (Provera) of Cytran.
4. Patients having abnormal menstrual pattern, (oligomenorrhea, hypomenorrhea, or hypermenorrhea), found improvement in 32 out of 41 instances (78 per cent).
5. Cytran is highly acceptable, showing few and temporary side effects.

References

1. Dalton, Katharina: Menstruation and Accidents. British Med. Journal 1:1425, 1960.
2. Cooke, W. R.: Differential Psychology of the American Women. Am. J. Obs. & Gyn. 49:457, 1945.
3. Morton, J. N. et al.: A Clinical Study of Premenstrual Tension. Am. J. Obs. & Gyn. 65:1182, 1953.
4. Perr, Irwin N.: Medical, Psychiatric and Legal Aspects of Premenstrual Tension. Am. J. Psychiatry 115 (part 1):211, 1958-59.

The Herculean Task of Communication

If there were no pharmaceutical advertising, new lifesaving drugs would be withheld from the critically ill patients either because the physician did not even know the new drug existed, or because he did not know its exact indications and how to administer it safely and effectively. Given the present rate of medical progress and the consequent production of new curative agents, the competitive stimulus is, I believe, the only force adequate for the Herculean task of their introduction to the medical profession. If, in order to use new medicines effectively and safely, the doctor had to depend upon the grinding out of adequate information by a centralized bureaucracy, progress in their use would be hideously slow.—Francis Boyer, Chairman of the Board, Smith Kline & French Laboratories, in New York Academy of Medicine **Bulletin,** March, 1962.

Sublingual Ergotamine Tablets

• The author offers his experiences with a new remedy for headaches.

HENRY D. OGDEN, M. D.*
New Orleans

Wigraine

ERGOTAMINE tartrate is recognized as an effective drug for the relief of symptoms of vascular headache and remains the principal standby in the treatment of this type of headache. It was first isolated by Stoll in Switzerland and has been shown to be a most effective constrictor of the dilated cerebral vessels which are considered responsible for the pain of vascular headache. Ergotamine tartrate has been prepared in several dosage forms, combinations for oral as well as parenteral use. One of the most used of these combinations, Wigraine,† contains in addition to the ergotamine tartrate, belladonna alkaloids, caffeine and an analgesic. Since nausea and vomiting often complicate oral administration, to bypass this and to obtain quicker absorption, it has been prepared in a suppository form. However, many people heartily dislike the use of suppositories from the esthetic standpoint, also suppositories are awkward and difficult to use. In addition many people suffer with hemorrhoids or a rectal irritation. Therefore, it is not surprising that many patients wait until it is too late before using the suppositories.

The sublingual method of administration may well be the answer. With this route of administration there is quick absorption and the stomach and liver are bypassed. Sublingual tablets also have the advantage that they may be used anywhere and at any time. Several medications have been given by sublingual route, nitroglycerin for example. Who would dream of prescribing nitroglycerin to be taken orally or rectally?

* Clinical Assistant Professor, Louisiana State University School of Medicine.

† Organon

In 1952,[1] I reported that the most common type of vascular headache is the frontal type and frontal headache is often accompanied by nasal symptoms. In another report.[2] I demonstrated that the use of an ergotamine containing preparation was often helpful in this type of headache. The preparation could vary from ergotamine tartrate itself to any of the various combinations. Therefore, the use of a sublingual ergotamine has a place in the everyday treatment of headaches.

Administration

Blumenthal and Fuchs[3, 4] in a careful study proved the effectiveness of sublingually administered ergotamine. They evaluated varying dosages and concluded a dosage of 1.5 mg. of Ergotamine tartrate to be the optimal dosage unit.

In our studies, we also used a 1.5 mg. dosage unit of ergotamine combined with belladonna 0.15 mg. in a sublingual tablet.‡ The patients were instructed to take one tablet repeating every fifteen minutes if no relief was obtained. However, due to the possible cumulative effect of ergotamine no more than four tablets were used for any one attack, and no more than seven were taken in one week.

Twenty-five private patients were evaluated during 45 separate episodes of headache. Thus almost all patients were studied during more than one attack of headache.

Twenty-three of the patients were adults, two were 14 and 15 years of age. The average age was 36.9 years. All were white and there were 19 females and 6 males. In nineteen the pain was located in the frontal area. Eight complained of pain in the occipital area, while eight com-

‡ Available as Wigrette—Organon Inc.

plained of pain in the temporal area. Only one complained of pain in the parietal area. It should be noted that of the twenty-five patients several complained of pain in more than one area.

Ten patients reported that nausea was associated with their headaches and 4 had vomiting. Other complaints were: 4 photophobia, 1 vertigo, 1 watering of the eyes, 2 eye strain, 7 had nasal symptoms and 1 visual difficulty.

While it was impossible to determine the type of headache as several complained of more than one type, all were of the vascular variety, with a marked preponderance of the frontal type (19). The frequency of attacks varied from almost continuous to a few who experienced their headaches at longer intervals. The number of headaches per patient for the group ranged from one four times a year to continuous.

Results

During this study on 13 occasions it was stated that severe headaches were present. Fourteen stated that the attacks were moderate, while in 16 attacks were mild in nature. It must be remembered that most patients were observed during more than one attack of headache. In two attacks of headache in the same patient the severity of the individual headache attacks were not recorded.

Results of treatment of attacks were as follows:

Complete relief	15
Good relief	17
Poor relief	4
No relief	9

Time required to terminate attacks

Relief in 1 hour or less	20
Relief in 2 hours or less	6
Relief in 4 hours or less	7
Relief in 12 hours or less	1
Relief in 24 hours or less	2

No relief in 9 patients

Side Effects

Fifteen attacks were accompanied by nausea and one by vomiting when taking the medication. Whether or not this was a part of their original headache syndrome it is impossible to say, since ten reported nausea and four vomiting associated with their headaches without medication. Thirstiness was reported during four attacks.

Conclusions

In 45 attacks of headache sublingual Wigrettes proved to be very effective as a measure for the relief of head pain. The onset of relief is rapid in many patients.

References

1. Ogden, Henry D.: Frontal Headache, New Orleans M. & S. J. 104:326, 1952.
2. Ogden, Henry D.: The Treatment of Allergic Headache, Ann. Allergy, 9:611 (Sept.-Oct.) 1951.
3. Blumenthal, L. S. and Fuchs, M.: Vascular Headaches, Med. Times, Vol. 90, No. 1, January 1962.
4. Blumenthal, L. S. and Fuchs, M.: Vascular Headache; Its Treatment with Sublingual Ergotamine Tartrate, So. M. J., 53:1 (January) 1960.

The Revolution in Drug Development

The important role that basic research in the pharmaceutical industry has played in the development of new drugs is evident. This revolution in drug development, which has taken place over the past 30 years, will accelerate further as basic research is increased by the pharmaceutical laboratory. The rate of progress will also increase, for the time interval between the discovery of basic knowledge and its application is steadily decreasing and will shorten further.—Basic Research in the Pharmaceutical Industry: Victor A. Drill, M. D., **J. Indiana State Medical Association, Jan. 1962.**

The Journal of the Louisiana State Medical Society

Established 1844

Published by The Journal of the Louisiana State Medical Society, Inc. under the jurisdiction of the following named Journal Committee:

Ralph H. Riggs, M. D., Ex-Officio
C. M. Horton, M. D., Chairman
Sam Hobson, M. D., Secretary
Edwin H. Lawson, M. D.
J. E. Knighton, M. D.
M. D. Paine, Jr., M. D.

EDITORIAL STAFF

PHILIP H. JONES, M. D., Editor

COLLABORATORS—COUNCILORS

Nicholas J. Chetta, M. D.
J. E. Clayton, M. D.
Guy R. Jones, M. D.
C. E. Boyd, M. D.
Henson S. Coon, M. D.
John L. Beven, M. D.
J. Y. Garber, M. D.
R. E. C. Miller, M. D.

C. GRENES COLE, M. D., General Manager
1430 Tulane Avenue

Subscription Terms: $4.00 per year in advance, postage paid, for the United States; $5.00 per year for all foreign countries belonging to the Postal Union.

News material for publication should be received not later than the eighteenth of the month preceding publication Orders for reprints must be sent in duplicate when returning galley proof.

Manuscripts should be addressed to the Editor, 1430 Tulane Ave., New Orleans, La.

The Journal does not hold itself responsible for statements made by any contributor.

Editorial

AMPAC is Effective

AMPAC—The American Medical Political Action Committee is a voluntary, nonprofit, unincorporated group whose membership consists of physicians, their wives, members of their immediate family and others. It was formed in the summer of 1961, in order that American medicine might have an effective political arm to combat socialized medicine and to insure the political support against it. This influence properly placed would allow the physician to continue to practice medicine in an atmosphere free from politics.

The American Medical Association, state and county or parish medical societies are prohibited by federal law from participating in campaigns for federal office. These units of organized medicine can and do work effectively in the fields of public education, legislative activities and lobbying. Beyond this they cannot go. The choice and support of individual candidates must come from sources separate from our medical organizations. It is for this purpose that AMPAC was formed. It is designed for legality, mobility and incisive action and is functioning nationwide at this time. It is planned that the national, state and local committees will function during elections but also between elections. Educational activities applied on a continuing schedule will produce a political climate favorable to our having effective influence at the polls.

AMPAC is not partisan. It is neither Republican nor Democratic. It has and will use its influence on the basis of the qualifications of the individual candidate, particularly whether his voting record is such as to support our position. AMPAC does not enter any state contest unless requested by the political action committee of that state. Having been so requested, it weighs carefully the local situation, the voting record of the candidates and aims to select districts, races and favorable candidates who can win.

In a report given by AMPAC to the

membership at a meeting recently in Los Angeles it was shown that in the congressional campaign which terminated on November 6, AMPAC had been 70 per cent effective nationally in the congressional districts in which it chose to participate. This was an encouraging report for a political group which at the time was barely fifteen months old and which had to campaign in a field where political wisdom and experience are essential. It was further reported that 42 members of the House of Representatives in Congress were marked for extinction by the affiliated labor groups which support the type of legislation that would lead to state medicine. Of those which were marked for defeat by the opposition, AMPAC chose to contest in 31 districts and was effective in returning to Congress 25 of the 31 it chose to support. This is a highly gratifying record. It should bring support from all physicians which as the committee requests should be in the precinct organization, at the polls, and with money. AMPAC's 70 per cent effectiveness in the congressional campaign is even more commendatory when it is considered in the light of its special circumstances.

Of special note is this—the grave danger of the Cuban situation which was known to all informed citizens during the past year was "discovered" just at the right time before election to influence many voters. They felt that in the time of serious national crisis the administration should be supported. There can be no doubt from our point of view as well as that of the administration that every vote counts. The proof of that is the 1960 election. Although nearly 69,000,000 voters went to the polls in 166,256 precincts throughout the United States, victory was won by a hairline margin of 112,881—less than one vote per precinct. Those who were directing AMPAC's efforts in the fall of 1962 gave details of how those activities had been made effective. There was nothing new about the procedure except that in certain areas pressure was being applied by the doctors for the first time. The method was the proper use of money and the painstaking precinct work carried out by the doctors, their wives and their interested supporters.

These observations tell us that physician influence in politics can get results. However, experience has demonstrated beyond arguement that one shot, one issue membership programs for political education actually accomplish little; and that political effectiveness depends on the knowledge by the individual and group of current issues and a continuity of their participation in political affairs. Our aim is to keep the practice of medicine free from political interference. It can only be done by making our political strength greater than that of those who would be delighted to direct us and the affairs of medicine. The formation of this political action committee is one of the most important pieces of political wisdom, forethought and planning ever undertaken by organized medicine. It will rank next to the implementation of the Flexner report on medical education in 1910.

The address of AMPAC is 520 North Michigan Avenue, Chicago 11, Illinois. The address of LAMPAC — Medical Political Action in Louisiana is c/o Dr. Gordon W. Peek, 1001 La. Nat'l. Bank Bldg., Baton Rouge, Louisiana.

If the practice of medicine is to remain free of political domination, AMPAC must have physician support.



ORGANIZATION SECTION

The Executive Committee dedicates this section to the members of the Louisiana State Medical Society, feeling that a proper discussion of salient issues will contribute to the understanding and fortification of our Society.

An informed profession should be a wise one.

REPORT ON ACTIONS OF THE HOUSE OF DELEGATES AMERICAN MEDICAL ASSOCIATION SIXTEENTH CLINICAL MEETING NOVEMBER 25-28, 1962 LOS ANGELES, CALIFORNIA

Health care for the aged, medical ethics, graduate medical education, expansion of the AMA Board of Trustees and a study of the sections and scientific program of the AMA were among the major subjects acted upon by the House of Delegates at the American Medical Association's Sixteenth Clinical Meeting held November 25-28 in Los Angeles.

In keynoting the Association's attitude toward Social Security health care for the aged, Dr. George M. Fister of Ogden, Utah, AMA president, told the opening session of the House:

"We will not compromise on the fundamental principles in which we believe and for which we have fought in the past with courage and good judgment. We will not jeopardize our position either by indicating a willingness to consider a compromise which would damage our basic principles, or by hasty action which might be misinterpreted."

Dr. Fister urged the entire medical profession to understand the basic issues in this struggle so that they can recognize the difference between compromise and surrender.

"The people will respond to the truth," he said, "and it is imperative that we as individuals and as an organization see that they get the truth."

The House reaffirmed, without compromise or change, the Association's present policy of opposition to the King-Anderson type of legislation and support for the Kerr-Mills program. In so doing, it also approved in principle the following suggested amendments to the Kerr-Mills Law:

1. Remove the requirement that both Old Age Assistance (OAA) and Medical Assistance for the Aged (MAA) programs be administered by the same agency;

2. Provide flexibility in the administration of the income limitations proposed under state law so that a person who experiences a major illness may qualify for benefits if the expense of that illness, in effect, reduces his money income below the maximum provided;

3. Include a provision in the law requiring state administering agencies to seek expert advice from physicians or medical societies through medical advisory committees; and

4. Provide for "free choice" of hospital and doctor under state programs.

At the same time, the House also endorsed in principle four proposed amendments to the Internal Revenue Code, designed to assist in financing the medical and hospital expenses of the aged. These amendments would: liberalize tax deductions for medical expenses of dependents over age 65; remove the 1 per cent drug limitation and include drugs as medical expenses; permit taxpayers over age 65 to receive full tax benefit for medical expenses by use of the carry-forward and carry-back principle, and provide a tax credit for medical expenses paid by the over age 65 taxpayer, proportionate to the relation between his medical expense and taxable income.

The House also approved a status report which concluded with this statement:

"It is our strong conviction that the legislative situation, the expanding health insurance and prepayment coverage, the improving economic status of the aged, and the many other factors cited in this report require that we face the 1963-1964 Congressional campaign without defeatism or complacency and with pride in the progress that has occurred. Finally, it is, above all, essential that our position not be undermined by the adoption of any policies that compromise our basic principles."

In considering seven so-called "pledge" resolutions, involving professional freedom, the House adopted a substitute resolution urging that all physicians be encouraged to support the position taken by the House of Delegates in June, 1961. That policy statement said:

"The House of Delegates invites attention to the fact that the medical profession is the only group which can render medical care under any system and that the medical profession is best qualified to determine how the best medical care can be delivered.

"The House of Delegates believes that the medical profession will see to it that every person receives the best available medical care regardless of his ability to pay, and it further believes that the profession will render that care according to the system it believes is in the public interest and that it will not be a willing party to implementing any system which is detrimental to the public welfare."

Medical Ethics

The Judicial Council submitted a report containing new opinions on the medical ethics involved in physician ownership of drug stores,

drug repackaging houses and drug companies, dispensing of glasses by ophthalmologists, and advertising practices of medical laboratories. The House decided that the questions of physician ownership of drug stores, drug repackaging houses and drug companies, and the dispensing of glasses by ophthalmologists, should not be acted upon at this time. Those opinions were returned to the Judicial Council for further study and report. The House approved the portion of the report relating to advertising practices of medical laboratories and agreed that the propriety of such practices should be determined at the local level in compliance with the new opinion. The House also approved the rules of procedure adopted by the Judicial Council for disciplinary action in cases where the Association now has original jurisdiction as conferred by the June, 1962, change in the Bylaws.

Interns and Residents

A special report on the compensation of interns and residents, which was published in the October 27 issue of JAMA, was presented to the House by the Council on Medical Education and Hospitals and the Council on Medical Service. The report was submitted as information only, with a request for further study, comments and suggestions. The House urged that all delegates, hospital staffs and medical societies discuss the report and forward all suggestions to the two Councils in time to influence the form of the report to be presented for action at the June, 1963 meeting.

In another action on graduate medical education, the House approved a report on internships and hospital services in which the Council on Medical Education and Hospitals recommended numerous changes in the Essentials of an Approved Internship. The House declared that "their acceptance will further strengthen the educational values of the internship and advance American Medicine's contribution to worthy goals of international educational exchange."

The House modified one Council recommendation to read as follows:

"In order to maintain high standards of education and better assure the patients' welfare, at least 25% of the total house staff (interns and residents) of a hospital should be graduates of accredited United States or Canadian medical schools. When United States and Canadian graduates represent a lesser portion of the house staff for two successive years, this will warrant that serious consideration be given to disapproving the internship."

The House instructed the Council on Medical Education and Hospitals to exert every possible effort and influence so that all hospitals with approved house officer training programs accept a reasonable number of foreign medical school graduates.

Board of Trustees

The House, by a vote of 130 to 48, adopted changes in the Constitution and Bylaws which would have implemented the June, 1962, recommendations of the Ad Hoc Committee on the Board of Trustees, including expansion of the Board from 11 to 15 members. However, the Judicial Council later informed the House that the affirmative votes necessary to amend the Constitution should have totalled at least 144, or two-thirds of the 216 voting delegates registered at the Wednesday session. The House then adopted a motion to vote on the proposed Constitutional amendments, in accord with the changes made in the Bylaws, at the opening session of the June, 1963 meeting.

Sections and Scientific Program

A report by the Committee to Study the Scientific Sections, recommending major changes in the organizational structure and scientific program of the Association, was presented to the House by the Board of Trustees. However, because of many requests for delay in approval, the House instructed the Speaker to appoint an Ad Hoc Committee composed of members of the House, and including representatives of the sections, to study the subject and report next June.

Miscellaneous Actions

In considering a wide variety of resolutions and annual and supplementary reports, the House also:

Instructed the Board of Trustees to use every influence in their command to have the **Hill-Burton Law** amended in such a manner as to eliminate all categorical grants, eliminate the term "diagnostic and treatment centers" from any listings in the act and prevent federal funds being awarded under existing law as a grant to closed panel medical corporations to build diagnostic and treatment centers.

Declared that it is both the responsibility and duty of the AMA to submit testimony before Congress on the subject of **research appropriations** in the health field.

Urged state and county medical societies to continue promoting the aggressive, consistent development of **Blue Shield** senior citizen programs.

Encouraged medical societies and physicians to provide cooperation and leadership in the formulation and operation of regional **hospital planning** bodies.

Approved **Essentials** of Acceptable Schools for Inhalation Therapy Technicians, Cytotechnology and Medical Technology and of Approved Residencies in Pediatric Cardiology.

Recommended that a Board report and two resolutions dealing with the **"Liberty Amendment"** be re-referred to the Council on Legislative Activities for further study.

Warned against the dangerously low level of

immunization for **smallpox** and urged physicians and their patients to maintain the needed protection.

Pointed out that state and county medical societies should collaborate with departments of **public health** in the interest of community health, always keeping in mind the need for a proper balance between local public health programs and the private practice of medicine.

Authorized the Board of Trustees to investigate the feasibility of establishing a **physicians' pension plan** and to present a plan for the implementation of such a program to the House in June.

Instructed the Board of Trustees to study the feasibility of **regional clinical sessions**, taking into consideration the already established regional meetings of medical specialty groups and the Academy of General Practice.

Commended the Council on National Security and its Committee on **Disaster Medical Care** for initiating a visitation program with committees on emergency medical service of state medical societies.

Expressed appreciation and thanks to the **Woman's Auxiliary** for their impressive accomplishments in behalf of our free society.

Opening Session

The delegates learned from a report by the American Medical Association Education and Research Foundation that one out of every ten medical students in the U. S. is now benefiting from the new student loan program. Since its inception nine months ago, the program has granted loans totaling more than nine million dollars to 3,042 medical students and 1,787 interns and residents, with applications being received at a rate of 150 per week. It also was announced that Merck Sharp & Dohme pharmaceutical company is making a second matching grant of $100,000 in support of the loan fund. The AMA-ERF also received contributions totaling $440,583 from physicians in five states for financial aid to medical schools.

Registration

Final registration at the Los Angeles meeting reached a total of 10,908, including 5,209 physicians.

PUBLIC HOSPITAL MAY NOT BAR DOCTOR BECAUSE OF PERSONAL FRICTION

Denial of staff privileges to a doctor by a governmental hospital because he was not "temperamentally suitable for hospital staff practice" was held to be unlawful. The California Supreme Court ruled that the Board of a district hospital exceeded its statutory authority in excluding the doctor.

The law governing district hospitals requires that the rules of the hospital contain "Provision that membership on the medical staff shall be restricted to physicians and surgeons competent in their respective fields, worthy in character and in professional ethics." The court said that the law does not give the hospital Board any authority to establish other conditions for membership on the hospital staff.

The Board, after a hearing, had excluded the doctor. It found that he was temperamentally unsuitable on the basis of evidence that he "was unable to get along with" other doctors in other hospitals where he had staff privileges. The court said that friction resulted from disagreement as to treatment of patients, criticism of hospital personnel and practices, and participation in professional liability suits as a witness.

The court held that denial of staff privileges in the district hospital could have the effect of denying the doctor the right to fully exercise his profession. It ruled that such a governmental hospital should not be permitted to adopt standards for exclusion so vague as to create a substantial danger of arbitrary discrimination in their application. It held that a "temperamental unsuitability" standard was defective in this manner. Accordingly, the court ordered the hospital to admit the doctor to staff privileges.

Rosner v. Eden Township Hospital District, P. 2d (Cal., Oct. 24, 1962)

MEDICAL NEWS SECTION

CALENDAR

PARISH AND DISTRICT MEDICAL SOCIETY MEETINGS

Society	Date	Place
Ascension	Third Tuesday of every month	
Calcasieu	Fourth Tuesday every other month	Lake Charles
East Baton Rouge	Second Tuesday of every month	Baton Rouge
Jefferson	Third Thursday of every month	
Lafayette	Second Tuesday of every month	Lafayette
Morehouse	Third Tuesday of every month	Bastrop
Natchitoches	Second Tuesday of every month	
Orleans	Second Monday of every month	New Orleans
Ouachita	First Thursday of every month	Monroe
Rapides	First Monday of every month	Alexandria
Sabine	First Wednesday of every month	
Tangipahoa	Second and fourth Thursdays of every month	Independence
Second District	Third Thursday of every month	
Shreveport	First Tuesday of every month	Shreveport
Vernon	First Thursday of every month	

DR. LAPHAM NAMED PROVOST OF TULANE UNIVERSITY SCHOOL OF MEDICINE

Dr. Maxwell E. Lapham, dean of the Tulane University School of Medicine, has been named provost of the University, effective February 1, 1963. He will continue to serve as dean until his successor has been selected.

Dr. Lapham joined the Tulane medical faculty in 1937 as director of the division of medical extension and assistant professor of obstetrics. He served in these capacities until his appointment as dean and professor of medicine in 1940.

He is a native of Newfane, N. Y., and received his doctor of medicine degree from the University of Pennsylvania in 1925. He served as an instructor in obstetrics in that institution from 1929 through 1931.

Dr. Lapham was a field instructor in obstetrics for the University of Virginia and Medical College of Virginia from 1932 to 1934, and for the Mississippi State board of health from 1934 to 1936.

As medical extension director at Tulane from 1937 to 1940, he organized, promoted and directed extension courses in various fields for practicing physicians in Mississippi.

His service as dean of the Tulane medical school was interrupted by service in the Navy during World War II. He served for four years and was separated from the service with the rank of captain.

Last year, Dean Lapham was named a member of the National Advisory Council on Health Research Facilities by Dr. Luther L. Terry, surgeon general of the U. S. Public Health Service.

AMA COMMENDS AAMA

Physicians really do appreciate the work of their medical assistants. They even appreciate their official organization.

To prove it, members of the American Medical Association's House of Delegates at the 1962 Clinical Meeting in Los Angeles officially patted medical assistants on the back and offered to support their organization.

A special resolution spelled out the thanks of the medical profession. This resolution stated that the AMA appreciated the work of the American Association of Medical Assistants "for the dedicated and unselfish assistance and work in the combined goal of the two organizations in continually striving to improve the character of medical standards."

Further, the AMA resolution emphasized that the AMA "wholeheartedly endorse(s) the program and functions of the American Association of Medical Assistants and encourage(s) every physician who has in his employ or under his supervision medical assistants who are eligible for membership in the American Association of Medical Assistants to urge all these assistants not only to join the American Association of Medical Assistants but to actively participate in their programs."

There are four chapters of the American Association of Medical Assistants in Louisiana: New Orleans, East Baton Rouge, Ouachita, and the 8th District in Alexandria. It is hoped there will be more.

COURSE IN INFECTIOUS DISEASE

The University of Texas Postgraduate School of Medicine

The University of Texas Postgraduate School of Medicine has announced a course on "Infectious Disease — 1963 — Recent Contributions of Lasting Value," scheduled for Thursday and Friday, February 28 and March 1, 1963. The course will be held in the Texas Medical Center, Houston, Texas.

The program will include a number of outstanding guest speakers, who will discuss New Concepts in Immunology, Bacterial Hypersensitivity, Applied Pharmacology of Antimicrobial Agents, Undue Susceptibility to Infection, Present Status of Antifungal Antibiotics, Some Basis for Judgment in the Use of the Antimicrobial

Agents, Hypersensitivity and Penicillin, Fluorescent Antibody Techniques in the Diagnosis of Infectious Diseases, Progress in Virology, Adventures in the Prevention of Hepatitis, Use of Live and Killed Measles Vaccine, Prevention of Viral Diseases and Perspectives of Infectious Disease.

For further information write: Office of the Dean, The University of Texas Postgraduate School of Medicine, 102 Jesse Jones Library Building, Texas Medical Center, Houston 25, Texas.

TWENTY-SIXTH ANNUAL MEETING THE NEW ORLEANS GRADUATE MEDICAL ASSEMBLY

The twenty-sixth annual meeting of The New Orleans Graduate Medical Assembly will be held March 4, 5, 6 and 7, 1963, headquarters at The Roosevelt Hotel.

Nineteen outstanding guest speakers will participate and their presentations will be of interest to both specialists and general practitioners. The program will include fifty-five informative discussions on many topics of current medical interest, in addition to clinicopathologic conferences, symposia, medical motion pictures, round-table luncheons and technical exhibits.

Following the meeting in New Orleans, arrangements have been made for a clinical tour to Mexico leaving New Orleans via air on March 8. The itinerary includes visits to Mexico City, Cuernavaca, Taxco and Acapulco, returning on March 23. Optional extensions in Mexico may be arranged.

Details of the New Orleans meeting and the tour are available at the office of the Assembly, Room 105, 1430 Tulane Avenue, New Orleans 12, Louisiana.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

The next scheduled examination (Part II), oral and clinical, will be conducted for all candidates at the Edgewater Beach Hotel, Chicago, Illinois, by the entire Board, April 29-May 4, 1963. Formal notice of the exact time of each candidate's examination will be sent him in advance of the examination dates.

Candidates who have participated in the Part I examination will be notified of their eligibility for the Part II examination as soon as possible.

Current Bulletins of the American Board of Obstetrics and Gynecology outlining the requirements for application, may be obtained by writing to the Secretary, 2105 Adelbert Road, Cleveland 6, Ohio. All prospective candidates are urged to review the current requirements before applying for Board examination.

Diplomates are requested to keep the Board office informed of any changes in address.

BOOK REVIEWS

Diseases of the Newborn; by Alexander J. Schaffer, M. D., W. B. Saunders Company, Philadelphia and London, 1960. First Edition. 878 p. Price, $20.00.

Diseases of the Newborn is a reference text for practitioners to infants. Term infants are starred, with premature and postmature infants in minor roles. Serious illnesses, including unusual ones, are carefully considered.

The book is colorfully bound and of handy weight and size. Headings stand out through heavy type and generous spacing. Print is easily readable in two columns per page, words are carefully chosen, sentence structure is good, and spelling is rarely incorrect. Meaning is clear. It is concisely written, but thorough.

Nine sections are classified according to body systems; the other six are on the Normal and the Abnormal Newborn, Infections, Jaundice, Nutrition, and Miscellaneous Disorders. Appendices are Nursery Care, Resuscitation, Erythroblastosis, and an excellent Pharmacopoeia. The table of contents is most useful. There are 306 x-ray photographs and 53 microphotographs; diagrams, tables, electrocardiograms, and ordinary photographs are also used.

Certain principles impressed the reviewer. The book emphasizes that newborns usually run fever with infections. Urinalysis should be done routinely. Auscultation and percussion of the chest are feasible, and palpation of the radial pulse is possible. Therapeutic agents considered safe for adults might be dangerous.

The book is a good one, and meets a current need by students of medicine. The readers of Holt, Nelson, and Parmelee should find it to be worthwhile. It conveniently assembles related knowledge in one volume, thereby spotlighting a patient group worthy of more attention by workers in research, practice and education.

M. S. McLellan, M. D.

Medicine Today: A report on a Decade of Progress; by Marguerite Clark. Funk and Wagnalls Company, New York. 1960. 360 p. Price, $4.95.

Written for the laity, this is a timely presentation of several facets of modern medicine. Aft-

er noting some pitfalls of medical reporting to the public, the author takes up several medical subjects frequently found to be topics of conversation. Interviews with leaders in clinical and investigative medicine provided the basic information. Mental illness in children and adults, cardiovascular disease, cancer, diabetes, arthritis, and reducing diets are dealt with in a manner calculated to separate fact from fiction for the vast public. A glimpse of the pharmaceutical industry is also provided.

This report provides for the interested layman a clear picture of some aspects of recent medical progress and its relationship to his health, interest, and financial contributions. While the approach sometimes borders on the melodramatic, it is far less so than much of the medical literature presented to the lay public. This book is recommended to an interested and often confused public.

W. J. Stuckey, M. D.

The Clonal Selection Theory of Acquired Immunity; by Sir MacFarlane Burnet, Vanderbilt Univ. Press, 1959. 209 p. Price, $5.00.

The publication in book form of Sir MacFarlane Burnet's clonal selection theory of acquired immunity is of unusual timeliness, since the author this year has, on the basis of this theory and the experimental work performed in support of it, been named co-winner, with Dr. P. B. Medawar, of the Nobel prize in physiology and medicine.

In brief, Burnet's book sets forth the theory, cites striking analogies to be found in the fields of bacterial and viral metabolism and genetics, and finally uses the theory to arrive at possible explanations of underlying mechanisms involved in such diverse phenomena as congenital agammaglobulinemia, acquired immunologic tolerance, the collagen diseases and proliferative diseases of the reticular tissue and mesenchymal cells.

Burnet rightly states that any useful theory of antibody formation must be able to account for not only the specificity of antibodies and the anamnestic response, but also for such puzzling findings as the fact that animals ordinarily do not make antibodies to their own tissues, which are often fully antigenic in foreign species.

In essence, the clonal selection theory is as follows: during the embryonic life of an animal certain primitive mesenchymal cells acquire the ability to synthesize small amounts of serum globulin. For a period this synthesis is random in terms of the surface spacial configuration of the protein molecules, so that these molecules, only one type of which is produced by any one cell, assume thousands of different immunologic specifications. At this time those cells producing a globulin specific for any tissue antigen present in the animal are destroyed, presumably as a consequence of a reaction between soluble fragments of such tissues and globulin molecules still attached to the producing cell's surface. Thus these cells are selectively removed and only those remain which have the potential of synthesizing globulin molecules specific for antigens not present in the animal's own tissues. This sensitivity and randomization by the antibody-forming apparatus is temporary. Later on, after birth, the mesenchymal cells form fewer types of globulin molecules and furthermore are less easily killed by specific antigens. They tend, rather, to respond to them in several new ways, simultaneously: they begin to multiply, to evolve into other types of cells, especially plasma cells, and they begin to synthesize specific globulin molecules at a significantly greater rate. Thus the notion of a "clone", i.e., the clone being those cells descended from a single, or a few, primitive mesenchymal cells, which now form a family of developing, antibody-forming cells. In the normal, previously unimmunized animal, this would constitute a primary response to an antigenic stimulus. According to Burnet's theory, such antibody-forming cells would evolve still further, frequently to mature plasma cells, and finally would regress again to something resembling primitive cells, but with a difference: these cells would now be greatly increased in numbers over those originally able to respond to this particular antigen. Consequently, at any later encounter with the antigen it could be expected that there would occur a much more vigorous antibody response since many more cells would be involved. This would account, then, for the anamnestic or recall phenomenon.

In general Burnet's theory offers a fairly reasonable explanation for many immunologic phenomena, although in one or two instances the structure creaks a bit. Particularly ingenious is his explanation for the development of abnormal hemagglutinins in atypical pneumonia and in infectious mononucleosis. Since space will not permit an adequate discussion of this we heartily recommend the book itself to the interested reader.

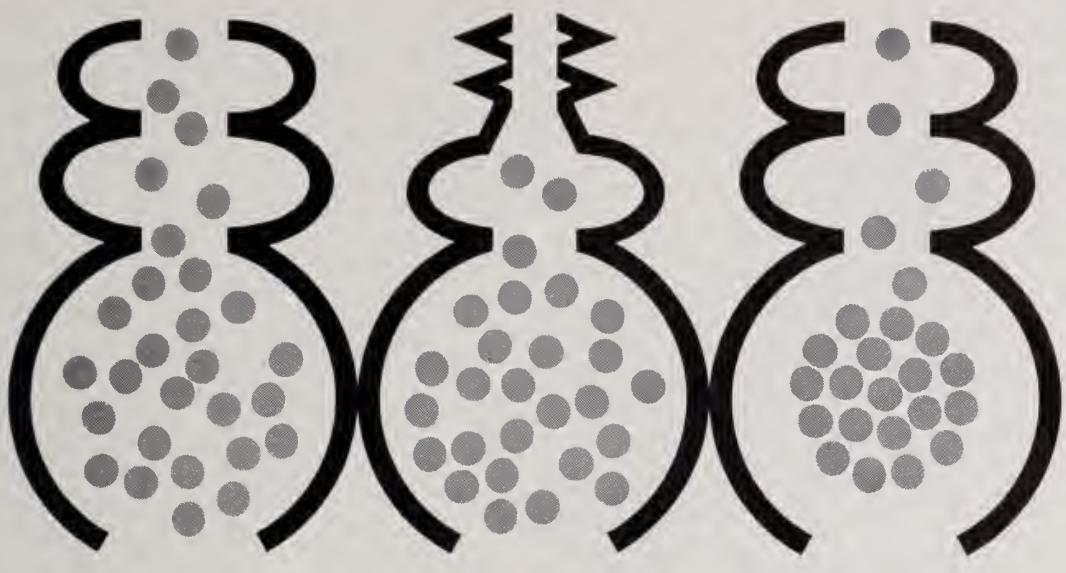
William A. Pierce, Jr., M. D.

PUBLICATIONS RECEIVED

(Certain ones of these will be selected for review)

Appleton-Century-Crofts, New York: Medical Resident's Manual, by Frank B. Flood, Richard J. Kennedy, and William J. Grace.

Charles C Thomas, Publisher, Springfield, Ill.: Eczema: Its Nature, Cure and Prevention, by Arthur Bobroff, M. D.



lowers motility | relieves cramping | stops diarrhea

LOMOTIL® Antidiarrheal tablets and liquid

(brand of diphenoxylate hydrochloride with atropine sulfate)

Traditionally the most effective means of slowing excess intestinal motility in diarrhea and so of relieving the disorder have been the opium derivatives. Now Lomotil makes available an antidiarrheal agent[1] of greater therapeutic efficiency than morphine.

By controlling hypermotility, the basic mechanical dysfunction of diarrhea, Lomotil reduces the frequency and fluidity of stools, diminishes cramping and controls diarrhea in many patients in whom other drugs have proved inadequate.

In a recent clinical report Cayer and Sohmer[2] state: "The alleviation of symptoms [with Lomotil] was usually prompt, occurring within 24 to 72 hours even in the long-standing chronic cases. . . . A surprisingly satisfactory response was obtained in 75 per cent of the patients with regional enteritis and in 63 per cent of those with ulcerative colitis, all of whom had failed to respond to other measures."

The high therapeutic efficiency of Lomotil, its safety, convenience and economy may be used to advantage in acute or chronic diarrhea.

Dosage: For *adults* the recommended initial dosage is two tablets (2.5 mg. each) three or four times daily. Maintenance dosage may be as low as two tablets daily.

Lomotil is supplied as unscored, uncoated white tablets of 2.5 mg. and as liquid containing 2.5 mg. in each 5 cc. A subtherapeutic amount of atropine sulfate (0.025 mg.) is added to each tablet and each 5 cc. of the liquid to discourage deliberate overdosage. Recommended dosage schedules should not be exceeded.

Note: Lomotil is an exempt preparation under Federal narcotic statutes.

Detailed information and directions for use in children and adults are available in Physicians' Product Brochure No. 81. G. D. Searle & Co., P. O. Box 5110, Chicago 80, Illinois.

1. Janssen, P. A. J., and Jageneau, A. H.: A New Series of Potent Analgesics: Dextro 2:2-Diphenyl-3-Methyl-4-Morpholino-Butyrylpyrrolidine and Related Amides. I. Chemical Structure and Pharmacological Activity, J. Pharm. Pharmacol. 9:381-400 (June) 1957.
2. Cayer, D., and Sohmer, M. F.: Long-Term Clinical Studies with a New Constipating Drug, Diphenoxylate Hydrochloride, N. Carolina Med. J. 22:600-604 (Dec.) 1961.

G. D. SEARLE & CO. *Research in the Service of Medicine*

neither **stasis** nor **spasm,**
nor **tension**
stays this patient
from his
appointed rounds



DECHOLIN-BB®

. especially when
UPPER G.I. COMPLAINTS
have biliary implications

Each Tablet Contains:

for biliary/intestinal **stasis** → DEHYDROCHOLIC ACID 250 mg. (3¾ gr.).

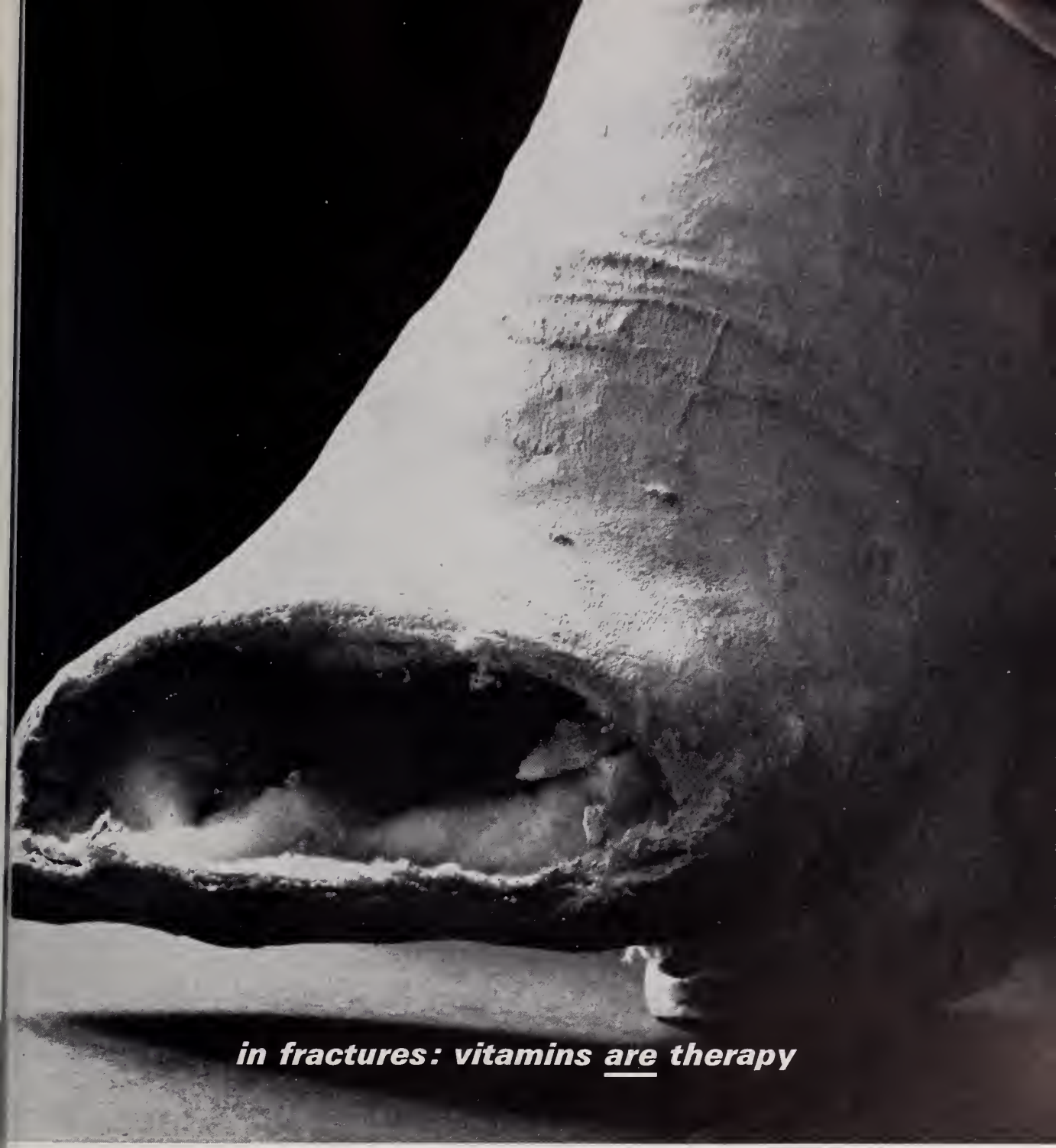
for smooth-muscle **spasm** → BELLADONNA EXTRACT 10 mg. (⅙ gr.).

for nervous **tension** → BUTABARBITAL SODIUM 15 mg. (¼ gr.)

Average adult dose: 1 or, if necessary, 2 tablets three times daily. **Precautions:** Observe patients periodically for increased intraocular pressure and barbiturate habituation or addiction; caution drivers against possible drowsiness. **Side effects:** Dehydrocholic acid may cause transitory diarrhea; belladonna may cause blurred vision and dry mouth. **Contraindications:** Biliary tract obstruction, acute hepatitis, glaucoma, prostatic hypertrophy. **Available:** DECHOLIN-BB, bottles of 100 tablets. **Also:** DECHOLIN® with Belladonna (dehydrocholic acid, 250 mg.; belladonna extract, 10 mg.) and DECHOLIN® (dehydrocholic acid, 250 mg.), bottles of 100 and 500 tablets.

34963

AMES COMPANY, INC.
Elkhart, Indiana
Toronto, Canada



Few factors are more fundamental to tissue and bone healing than nutrition. Therapeutic allowances of B and C vitamins are important for rapid replenishment of vitamin reserves which may be depleted by the stress of fractures. Metabolic support with STRESSCAPS is a useful adjunct to an uneventful recovery. Supplied in decorative "reminder" jars of 30 and 100.

Each capsule contains:	
Vitamin B_1 (Thiamine Mononitrate)	10 mg.
Vitamin B_2 (Riboflavin)	10 mg.
Niacinamide	100 mg.
Vitamin C (Ascorbic Acid)	300 mg.
Vitamin B_6 (Pyridoxine HCl)	2 mg.
Vitamin B_{12} Crystalline	4 mcgm.
Calcium Pantothenate	20 mg.

Recommended intake: Adults, 1 capsule daily, or as directed by physician, for the treatment of vitamin deficiencies.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N.Y.

STRESSCAPS®

Stress Formula Vitamins Lederle

USANOL®

a new approach for an old problem

URINARY TRACT PATHOGENS URINARY TRACT PATHOGENS

USANOL Tablets are a urinary antiseptic and antispasmodic that destroy most urinary tract pathogens including strains resistant to antibiotics and sulfonamides.

COMPOSITION:
Each tablet contains:
Methenamine mandelate 3.75 grs.
Homatropine methylbromide 1/200 gr.

AVAILABILITY:
Available in bottles of 100 and 500 tablets.

DOSAGE:
Usual dose is one to two tablets 3 to 4 times a day but can be increased if needed.

CONTRAINDICATIONS:
Contraindicated in renal insufficiency, and caution in patients with glaucoma because of homatropine methylbromides.

ANOTHER ESTABLISHED NEED PRODUCT

FTP **First Texas** *Pharmaceuticals, Inc.* DALLAS • ATLANTA

SERVING THE PHYSICIAN'S NEEDS SINCE 1901



Relieves Anxiety and Anxious Depression

The outstanding effectiveness and record of safety with which Miltown relieves anxiety and anxious depression—the type of depression in which either tension or nervousness or insomnia is a prominent symptom — has been clinically authenticated time and again during the past seven years. This, undoubtedly, is one reason why physicians still prescribe meprobamate more often than any other tranquilizer in the world.

Miltown®

meprobamate (Wallace)

Usual dosage: One or two 400 mg. tablets t.i.d.
Supplied: 400 mg. scored tablets, 200 mg. sugar-coated tablets; bottles of 50. Also as MEPROTABS® — 400 mg. *unmarked*, coated tablets; and in *sustained-release* capsules as MEPROSPAN®-400 and MEPROSPAN®-200 (containing respectively 400 mg. and 200 mg. meprobamate).

WALLACE LABORATORIES / *Cranbury, N. J.*

Clinically proven in over 750 published studies

1. Acts dependably — without causing ataxia or altering sexual function
2. Does not produce Parkinson-like symptoms or liver damage
3. Does not muddle the mind or impair physical activity

CM-7972

from Oroya fever in Peru



o lobar pneumonia in Louisiana

ere is a world of experience behind Terramycin®

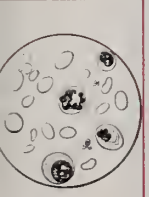
BRAND OF OXYTETRACYCLINE



Whether treating Oroya fever or a host of other infections, physicians throughout the world continue to rely on TERRAMYCIN for its outstanding safety, effectiveness and excellent tolerability. Not a single case of phototoxic reaction, blood dyscrasia or neurologic disturbance directly attributable to TERRAMYCIN has been reported in more than 3,000 clinical papers in the last 12 years. *In your practice, the next infection you see will very likely be "Terra-responsive."*



Oroya fever (Carrión's disease), prevalent only in certain valleys of the Andes, is characterized by a rapidly evolving, febrile pernicious anemia. The infecting organism is *Bartonella bacilliformis*, a gram-negative, flagellated organism, transmitted by night bites of the phlebotomus, or sand fly. The organism is unmistakably identifiable in blood films—no other human pathogen even slightly resembles it. The mortality rate of untreated Oroya fever can be as high as 40 per cent (in all probability, this was the disease which decimated Pizarro's army in the 16th century). Treatment with Terramycin produces dramatic reduction of fever and a stabilized blood count in 48 hours or less.

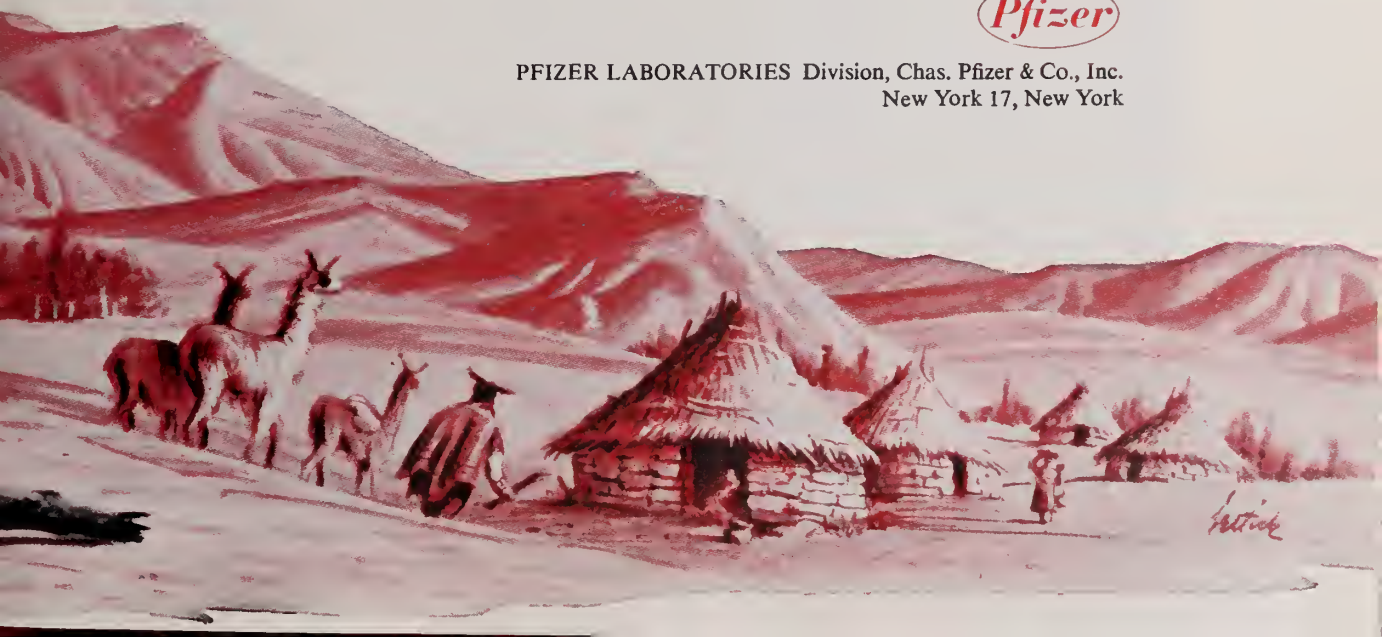


IN BRIEF The dependability of Terramycin in daily practice is based on its broad range of antimicrobial effectiveness, excellent toleration, and low toxicity. As with other broad-spectrum antibiotics, overgrowth of nonsusceptible organisms may develop. If this occurs, discontinue the medication and institute appropriate specific therapy as indicated by susceptibility testing. Glossitis and allergic reactions to Terramycin are rare. For complete information on Terramycin dosage, administration, and precautions, consult package insert before using. *More detailed professional information available on request.*

Science for the world's well-being®

Pfizer

PFIZER LABORATORIES Division, Chas. Pfizer & Co., Inc.
New York 17, New York




Since the influenza epidemic of 1918
Burroughs Wellcome & Co.
TRADE MARK 'TABLOID' BRAND
'Empirin' Compound
COMPRESSED

....the first choice of many physicians to relieve aches, pains, fever, and general malaise of colds and flu.

Symptomatic and supportive treatment of patients with upper respiratory infections still consists largely of rest, analgesics, fluids and nasal decongestants. During the fateful influenza epidemic of 1918, 'Empirin' Compound was widely used and became well known as a well tolerated and reliable analgesic combination. It was one of the few available analgesic products effective in simultaneously reducing fever and relieving the general malaise which often accompany the flu.

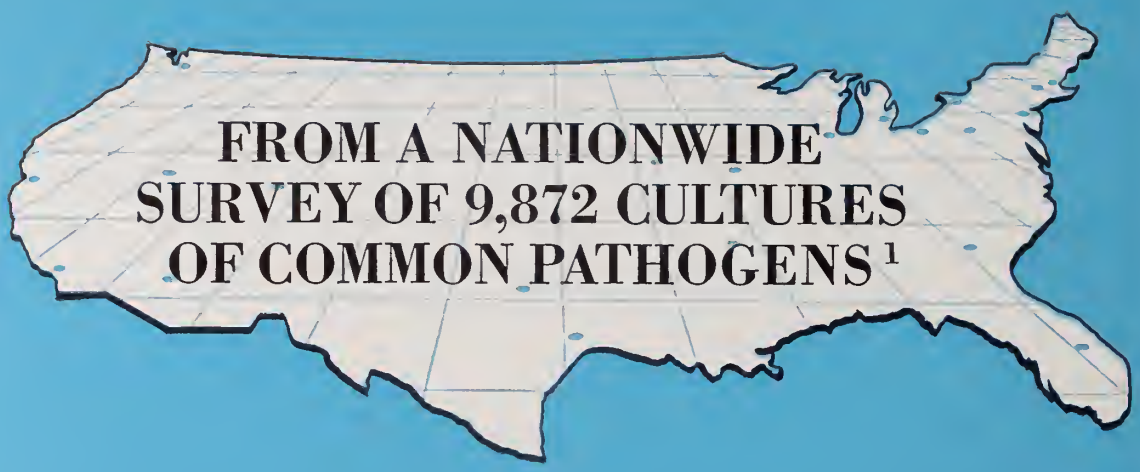
Later, 'Empirin' Compound with Codeine took its place with the widely used 'Empirin' Compound, as a product useful when increased analgesia or antitussive action was desired. Today, 'Empirin' Compound with Codeine is one of the most widely prescribed drugs in medicine, providing physicians with a dependable analgesic, especially useful in relieving the symptoms of colds and flu. We believe you will also find 'Empirin' Compound with Codeine Phosphate gr. ¼ (16 mg.) or gr. ½ (32 mg.) particularly useful in treating the troublesome cough that is often part of the influenza symptom complex.

'EMPIRIN' COMPOUND with CODEINE PHOSPHATE *



* Available on oral prescription where State law permits. Subject to Federal Narcotic Regulations.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.



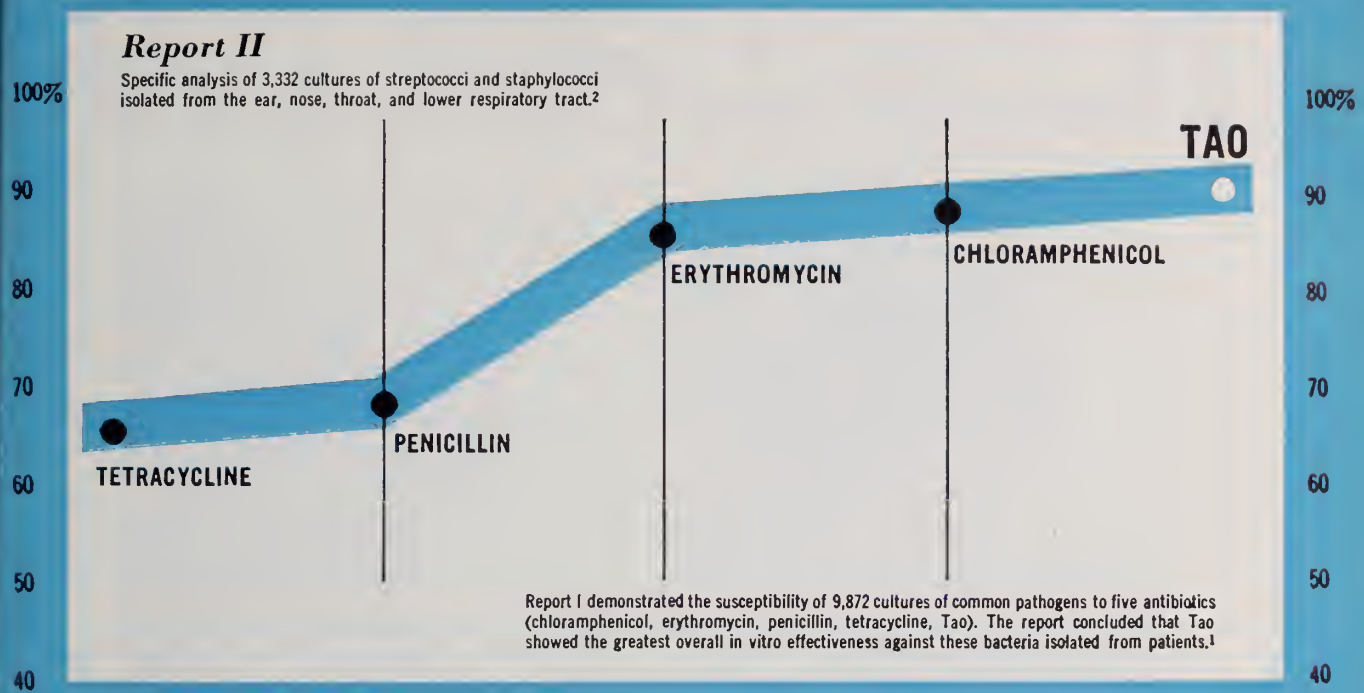
FROM A NATIONWIDE SURVEY OF 9,872 CULTURES OF COMMON PATHOGENS[1]

Conclusions of Nationwide Survey: *Report I*

1. **Even after five years of general use,** Tao, of the antibiotics tested, demonstrated greatest activity against respiratory streptococci and staphylococci (3,332 cultures).

2. **Overall results showed a higher percentage of susceptibility** among these common pathogens to Tao than to the other antibiotics. Susceptibility to Tao was greatest, not only in respiratory streptococci and staphylococci, but also in these organisms isolated from skin and soft tissue (3,423 cultures), genitourinary and gastrointestinal tracts and other sources (2,458 cultures). Susceptibility was equal to all antibiotics tested in pneumococci from unspecified sources (463 cultures), and less to Tao in H. influenzae from unspecified sources (196 cultures).

3. **Tao has been used for five years without development of predictable cross resistance.** In 1958 and 1961, approximately 73% and 70%, respectively, of erythromycin-resistant problem staphylococci showed susceptibility to Tao.[3,4] The present study confirms the continuing high degree of Tao activity even against these pathogens. Of 1,592 cultures of erythromycin-resistant staphylococci, 68% were susceptible to Tao, while in the reverse situation, only 33% of 768 Tao-resistant staphylococci were susceptible to erythromycin.



Report II

Results of Bacterial Susceptibility in 3,332 Respiratory Pathogens

References

1. "Bacterial Susceptibility Patterns: A Geographic Survey." Fowler, J. Ralph, M.D., and Watters, John L., M.D. Scientific Exhibit presented at the Annual Meeting of the American Society of Clinical Pathologists, Chicago, Ill., August 31 to September 9, 1962. 2. Fowler, J. Ralph, Watters, John L. and Levy, Arthur M.: Bacterial Susceptibility Patterns as Related to Geographic Variation and Anatomical Source. In press. 3. English, A. R., and Fink, F. C.: Antibiot. & Chemother. 8:420 (Aug.) 1958. 4. English, A. R., and Fink, F. C.: Antibiot. and Chemother. 11:648 (Oct.) 1961.

New York 17, N. Y.
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being®

If you would like a report of the entire susceptibility study, write Medical Department, J. B. Roerig and Company, 235 E. 42nd St., New York 17, N.Y.



Capsules · Ready-Mixed Oral Suspension · Pediatric Drops · Parenteral (as oleandomycin phosphate)

asthma attack averted
. . . in minutes

patient protected
. . . for hours





Nephenalin®

(the dual-action anti-asthmatic tablet)

. . . works with nebulizer speed—provides four-hour protection

One NEPHENALIN tablet provides: *air in a hurry*—through sublingual isoproterenol HCl, 10 mg. *air for hours*—through theophylline, 2 gr.; ephedrine, ⅜ gr.; phenobarbital, ⅛ gr.

Dosage: Hold one NEPHENALIN tablet under the tongue for five minutes to abort the asthmatic attack promptly. Then swallow the tablet core for four full hours' protection against further attack. Only one tablet should be taken every four hours. No more than five tablets in 24 hours.

Supplied: Bottles of 50 tablets. For children: NEPHENALIN Pediatric, bottles of 50 tablets.

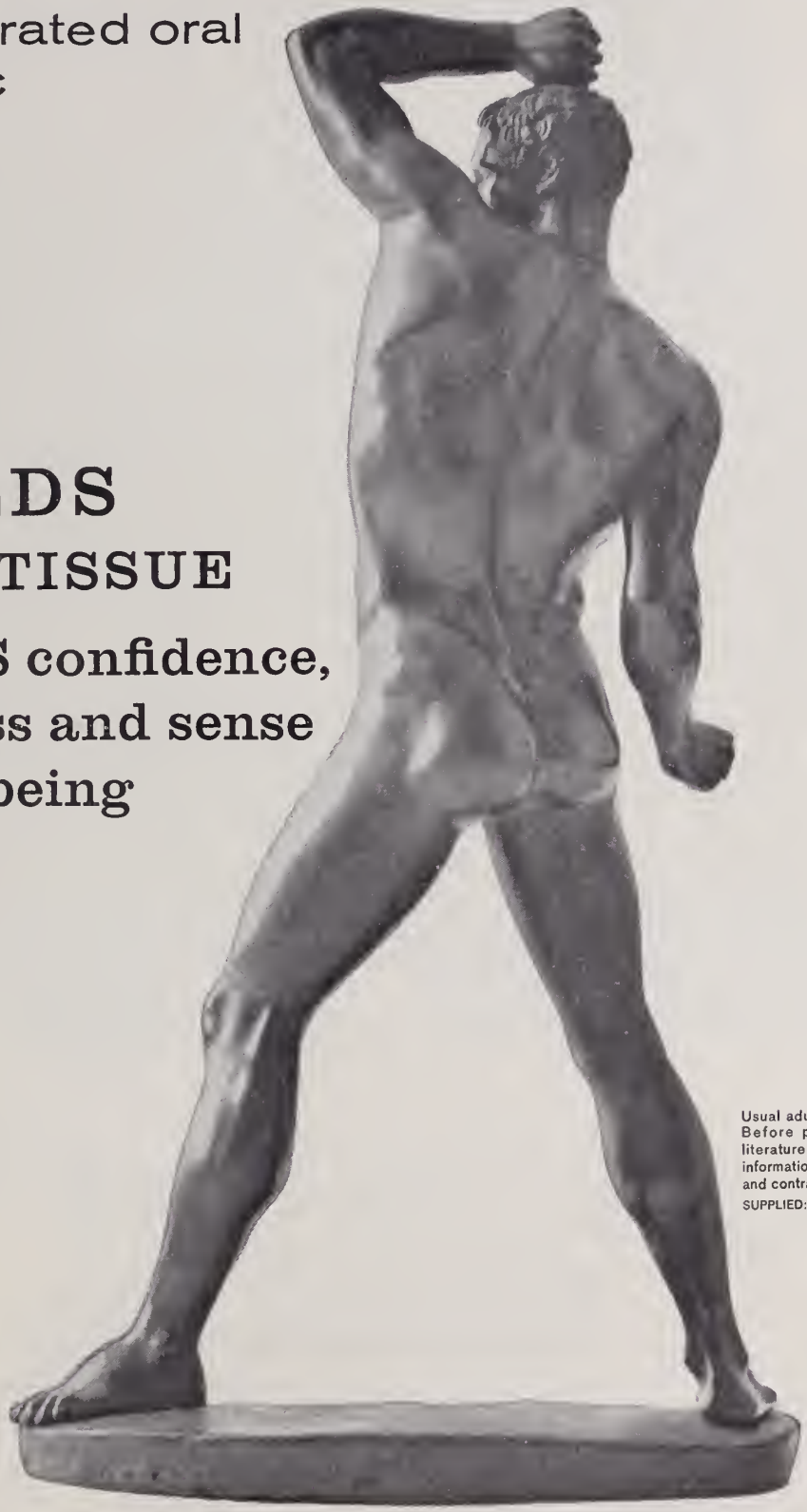
Caution: Do not administer NEPHENALIN with epinephrine. The two medications may be alternated at 4-hour intervals. NEPHENALIN should be administered with caution to patients with hyperthyroidism, acute coronary disease, cardiac asthma, limited cardiac reserve, acute myocardial damage, and to those hypersensitive to sympathomimetic amines. Phenobarbital may be habit forming. THOS. LEEMING & CO., INC., New York 17, N.Y.

THE SIGNIFICANT NEW PHYSIOTONIC

WINSTROL®

BRAND OF STANOZOLOL

well tolerated oral anabolic



BUILDS BODY TISSUE

BUILDS confidence, alertness and sense of well-being

Usual adult dose: 1 tablet t.i.d. Before prescribing, consult literature for additional dosage information, possible side effects and contraindications.

SUPPLIED: 2 mg. tablets. Bottles of 100.

Winthrop
LABORATORIES
New York 18, N. Y.

With WINSTROL, patients look better...feel stronger—because they are stronger

Browne-McHardy Clinics

MAIN CLINIC
3636 St. Charles Ave.
New Orleans 15, La.
TWinbrook 9-2376

GRAVIER ST. DIVISION
630 Gravier St.
New Orleans 12, La.
524-1605

VETERANS HIGHWAY DIVISION
8601 Veterans Memorial Hwy.
Metairie, La.
VErnon 3-7341

INTERNAL MEDICINE
Cardiology
Endocrinology
Gastroenterology
Hematology
Rheumatology
Donovan C. Browne, M. D.
Wiley H. Jenkins, M. D.
Robert C. Judice, M. D.
John T. Leckert, M. D.
G. Gordon McHardy, M. D.
Robert J. McHardy, M. D.
Thomas C. Roach, M. D.
Swan S. Ward, M. D.
George E. Welch, M. D.
Guy T. Williams, M. D

DERMATOLOGY
William Burroughs, M. D.

DISEASES OF THE CHEST
Joseph E. Blum, Jr., M. D.

EAR, NOSE and THROAT
Norma Kearby, M. D.

GENERAL SURGERY
Claude C. Craighead, M. D.
Raul G. Reyes, M. D.

OBSTETRICS and GYNECOLOGY
C. Gordon Johnson, M. D.
Robert I. Ayerst, M. D.
James M. Todd, Jr., M. D.

OPHTHALMOLOGY
Oliver H. Dabezies, M. D.

INDUSTRIAL MEDICINE
Ralph J. McDonough, M. D.
Horace A. Nabers, M. D.

PEDIATRICS
Carl E. Kemmerly, M. D.
Milton H. Donaldson, M. D.

RADIOLOGY and RADIOTHERAPY
Charles O'Dowd Lilly, M. D.
Joseph B. Marino, M. D.
Walter McDowell, M. D.

UROLOGY
John F. Lally, M. D.

AUXILIARY SERVICES
Cytology
Diabetics
Electroencephalograph
Endoscopy
Medical Laboratory
Pharmacy
Physical Therapy
Pulmonary Function Studies

A REVOLUTIONARY NEW PRINCIPLE FOR READING TEST RESULTS

THE ADAMS READACRIT CENTRIFUGE

A Direct Reading Micro-Hematocrit Centrifuge

Hematocrit values read directly from the reading scale in the head—*no separate reader required.*

This totally new approach to hematocrit reading represents the first dramatic improvement in the micro-hematocrit centrifuge since the technique was first introduced.

The Readacrit Centrifuge was designed as a direct result of requests from the physicians and smaller laboratories. It fills a gap that has existed for a long time — namely, it meets the need of the physician and small laboratory who perform only a limited number of tests at one time.

PEACOCK
SURGICAL COMPANY INC.
1235 TEXAS AVENUE
SHREVEPORT, LOUISIANA





Robitussin®

glyceryl guaiacolate

For the special care that winter coughs demand, both Robitussin formulas contain glyceryl guaiacolate which enhances the flow of Respiratory Tract Fluid (RTF) almost 200%.

Of practically all drugs now used clinically as expectorants, glyceryl guaiacolate exerts the most intense and prolonged action.

Increased RTF promotes bronchial drainage by liquefying tenacious sputum and exerts a soothing, demulcent effect on irritated bronchial mucosa that helps reduce the frequency of dry, tickling, unproductive coughs.

Robitussin A-C also contains pheniramine maleate to control associated allergic manifestations and codeine phosphate to suppress persistent, unproductive coughs.

Formulas—Robitussin: Glyceryl guaiacolate 100 mg. per 5 cc. Robitussin A-C: Glyceryl guaiacolate 100 mg., Pheniramine maleate 7.5 mg., Codeine phosphate 10 mg. per 5 cc.

A. H. Robins Co., Inc., Richmond 20, Virginia

ANNUAL CLINICAL CONFERENCE

CHICAGO MEDICAL SOCIETY

March 4, 5, 6 and 7, 1963

Palmer House, Chicago

Daily Half-Hour Lectures by Outstanding Teachers and Speakers on subjects of interest to both general practitioner and specialist.

Panels on Timely Topics — **Teaching Demonstrations**
Medical Color Telecasts — **Instructional Courses**
Film Lectures

Scientific Exhibits worthy of real study and helpful and time-saving Technical Exhibits

The Chicago Medical Society Annual Clinical Conference should be a MUST on the calendar of every physician. Plan now to attend and make your reservations at the Palmer House.

DR. WILLIAM B. TERHUNE
and
THE SILVER HILL FOUNDATION

ANNOUNCE:

Appointments available for Residents and Associates in the training and active practice of psychosomatic medicine as applied specifically to the treatment of the psychoneuroses.

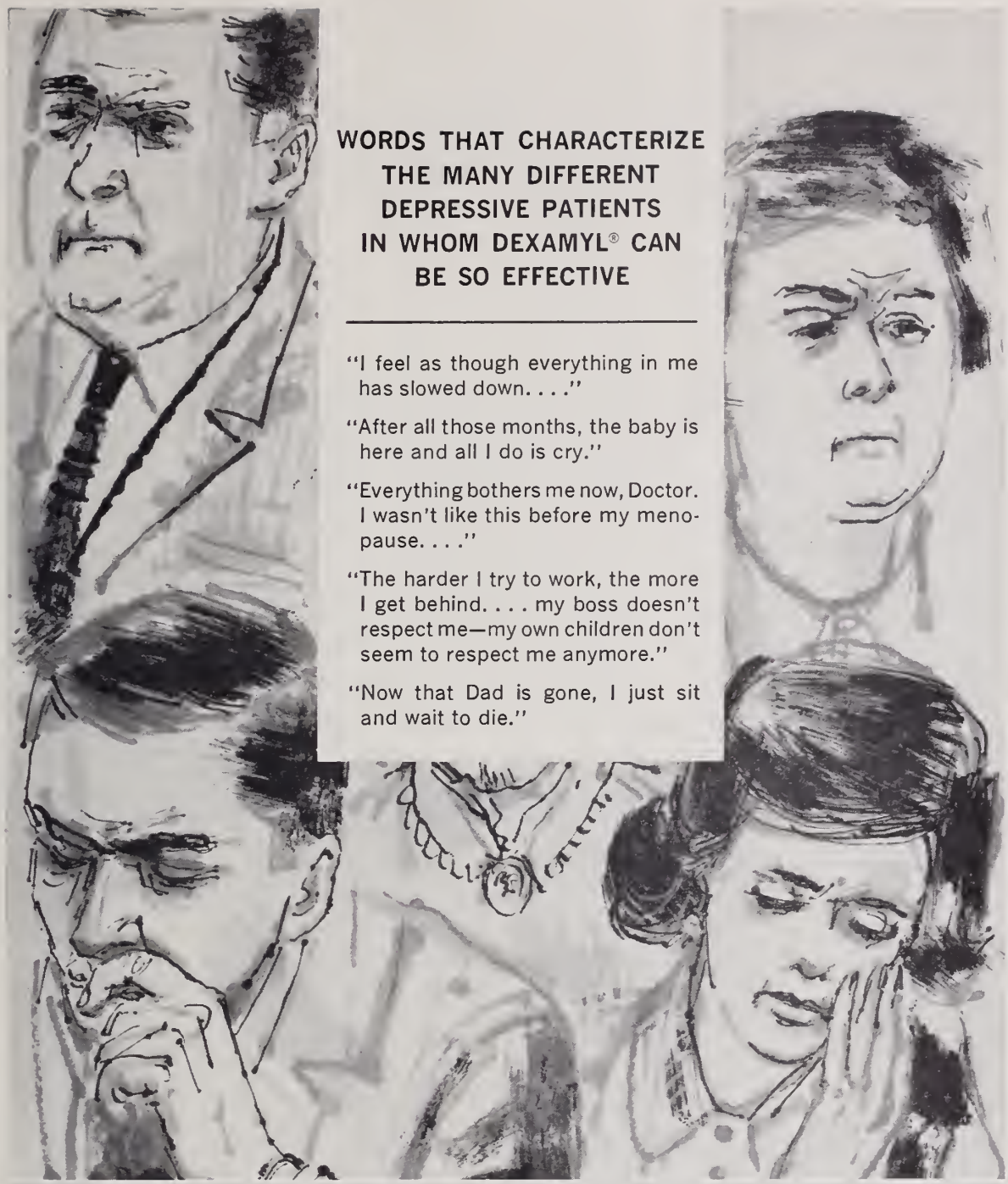
Generous compensation and opportunity for permanent staff appointment.

The Silver Hill Foundation is a psychotherapeutic unit for the treatment of functional nervous disorders (the psychoneuroses, psychosomatic disturbances and social psychiatric disorders). The setting is that of a comfortable country home devoid of sanatorium atmosphere where a limited number of patients are under intensive, re-educational treatment for a period of several weeks.

Only applicants with excellent educational background will be considered.

Apply To: Dr. William B. Terhune, Medical Director, New Canaan, Connecticut.

Associates: Dr. Marvin G. Pearce, Dr. Robert B. Hiden, Dr. William M. White, Dr. William D. Wheat, Dr. Warren A. Mann, Dr. Morgan F. Moore



WORDS THAT CHARACTERIZE THE MANY DIFFERENT DEPRESSIVE PATIENTS IN WHOM DEXAMYL® CAN BE SO EFFECTIVE

"I feel as though everything in me has slowed down. . . ."

"After all those months, the baby is here and all I do is cry."

"Everything bothers me now, Doctor. I wasn't like this before my menopause. . . ."

"The harder I try to work, the more I get behind. . . . my boss doesn't respect me—my own children don't seem to respect me anymore."

"Now that Dad is gone, I just sit and wait to die."

DEXAMYL® SPANSULE® brand of sustained release capsules

FORMULA: Each 'Spansule' capsule No. 1 contains 10 mg. of Dexedrine® (brand of dextro amphetamine sulfate), and 1 gr. of amobarbital, derivative of barbituric acid [Warning, may be habit forming]. Each 'Spansule' capsule No. 2 contains 15 mg. of 'Dexedrine' (brand of dextro amphetamine sulfate) and 1½ gr. of amobarbital [Warning, may be habit forming]. The active ingredients of the 'Spansule' capsule are so prepared that a therapeutic dose is released promptly and the remaining medication, released gradually and without interruption, sustains the effect for 10 to 12 hours.

INDICATIONS: (1) For mood elevation in depressive states; (2) for control of appetite in overweight.

USUAL DOSAGE: One 'Dexamyl' *Spansule* capsule taken in the morning for 10- to 12-hour effect.

SIDE EFFECTS: Insomnia, excitability and increased motor activity are infrequent and ordinarily mild.

CAUTIONS: Use with caution in patients hypersensitive to sympathomimetic compounds or barbiturates and in coronary or cardiovascular disease or severe hypertension.

SUPPLIED: 'Spansule' capsules No. 1 (1 dot on capsule) and No. 2 (2 dots on capsule), in bottles of 30.

Prescribing information October 1962.

Smith Kline & French Laboratories

SYNergized
aspIRIN

Synirin®

ANALGESIA

WITH A DOSAGE AS FLEXIBLE AS ASPIRIN

The simultaneous action of aspirin and pentobarbital begins promptly and lasts four to five hours. Each tablet contains aspirin 5 grs. and pentobarbital (acid) 1/8 gr. Synirin was formulated for a two-tablet dose for adults and a one-tablet dose for children from 5 to 12 years of age. It may be repeated every four hours for the relief of pain.

Dispensed in bottles of 100 and 1000 tablets

WM. P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA

Manufacturers of ethical pharmaceuticals since 1856



Put your low-back patient back on the payroll

Soma relieves stiffness –stops pain, too

YOUR CONCERN: Rapid relief from pain for your patient. Get him back to his normal activity, fast!

HOW SOMA HELPS: Soma provides direct pain relief while it relaxes muscle spasm.

YOUR RESULTS: With pain relieved, stiffness gone, your patient is soon restored to full activity—often in days instead of weeks.

Kestler reports in controlled study: *Average time for restoring patients to full activity: with Soma, 11.5 days; without Soma, 41 days. (J.A. M.A. Vol. 172, No. 18, April 30, 1960.)*

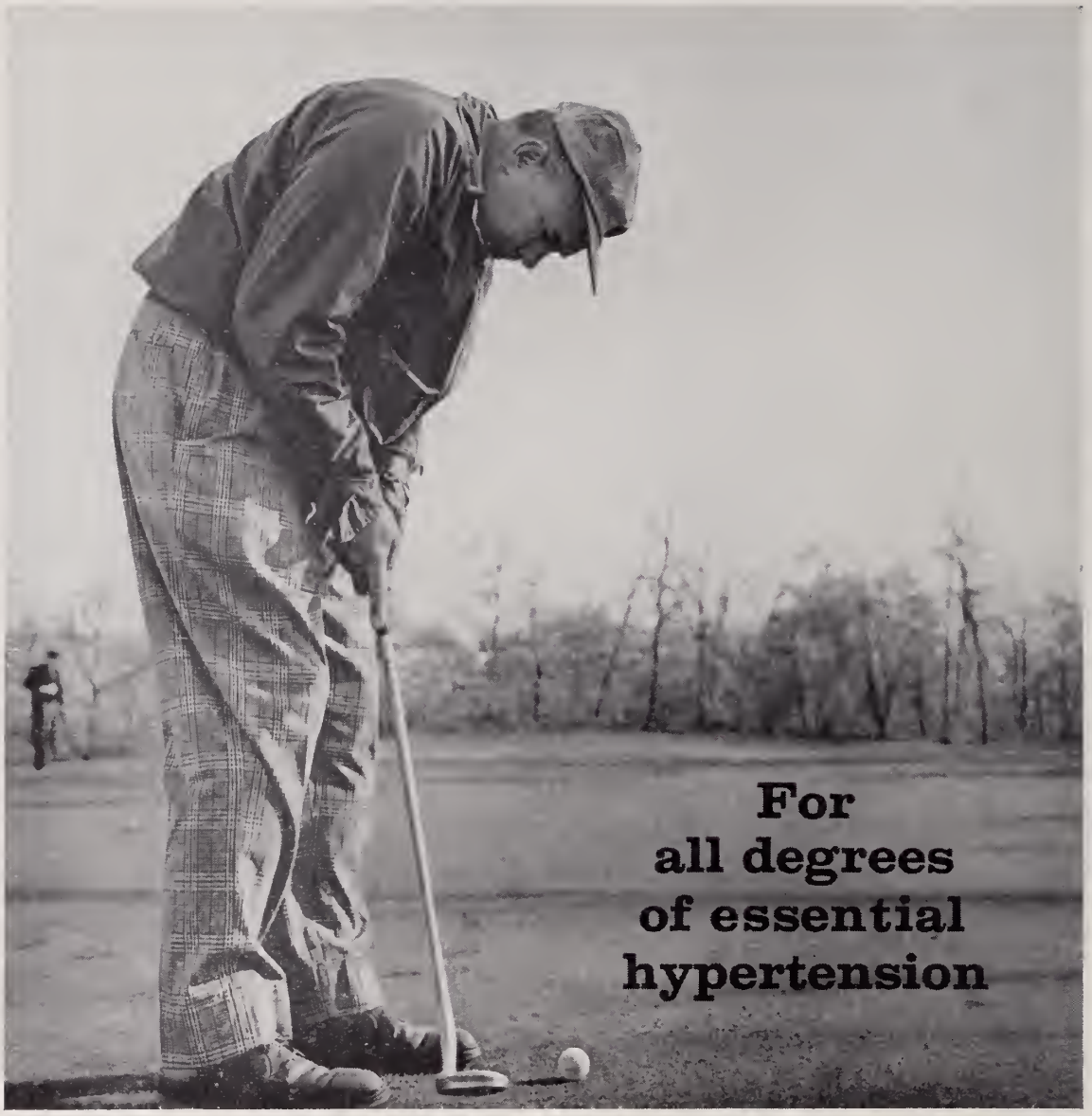
Soma is notably safe. Side effects are rare. Drowsiness may occur, but usually only in higher dosages. Soma is available in 350 mg. tablets. **USUAL DOSAGE: 1 TABLET Q.I.D.**

The muscle relaxant with an independent pain-relieving action

SOMA®

(carisoprodol, Wallace)

Wallace Laboratories, Cranbury, New Jersey



"relief of symptoms is striking with Rautrax-N"†

Rautrax-N decreases blood pressure for almost all patients with mild, moderate or severe essential hypertension. Rautrax-N also offers a new sense of relaxation and well-being in hypertension complicated by anxiety and tension. And in essential hypertension with edema and/or congestive heart failure, Rautrax-N achieves diuresis of sodium and chloride with minimal effects on potassium and other electrolytes.

Rautrax-N combines Raudixin (antihypertensive-tranquilizer) with Naturetin c̄ K (antihypertensive-diuretic) for greater antihypertensive effect and greater effectiveness in relief of hypertensive symptoms than produced by either component alone. Rautrax-N is also flexible (may be prescribed in place of Raudixin or Naturetin c̄ K) and economical (only 1 or 2 tablets for maintenance in most patients).

Supply: Rautrax-N — capsule-shaped tablets providing 50 mg. Raudixin, 4 mg. Naturetin and 400 mg. potassium chloride. *Rautrax-N Modified* — capsule-shaped tablets providing 50 mg. Raudixin, 2 mg. Naturetin and 400 mg. potassium chloride.

†Hutchison J. C.: Current Therap. Res. *2*:487 (Oct.) 1960.

For full information, see your Squibb Product Reference or Product Brief.

Rautrax-N*

Squibb Standardized Rauwolfia Serpentina Whole Root (Raudixin) and Bendroflumethiazide (*Naturetin) with Potassium Chloride

SQUIBB *Squibb Quality — the Priceless Ingredient*

SQUIBB DIVISION Olin

'RAUDIXIN'®, 'RAUTRAX'®, AND' NATURETIN'® ARE SQUIBB TRADEMARKS.



Colds haven't changed- but relief has with

NTZ®

NASAL SPRAY

NTZ Nasal Spray provides prompt, dependable decongestion of nasal membranes—for fast relief of colds. NTZ is "...singularly effective for nasal congestion due to either allergic or infectious causes."* In a major practice, it has been "an efficient nose drop which has superseded almost all others...."* More than a simple vasoconstrictor, NTZ is a combination of three thoroughly evaluated ingredients.

Neo-Synephrine® hydrochloride 0.5 per cent—opens engorged nasal passages, shrinks sinus ostia and provides proper breathing and drainage space.

Thenfadil® hydrochloride 0.1 per cent—provides powerful antiallergic action to check rhinorrhea.

Zephiran® chloride 1:5000 (antibacterial wetting agent and preservative)—promotes spread and penetration to less accessible nasal areas.

NTZ is well tolerated by the delicate respiratory tissues. In several hundred patients treated with NTZ, there were "...no deleterious effects from...frequent and prolonged use."*

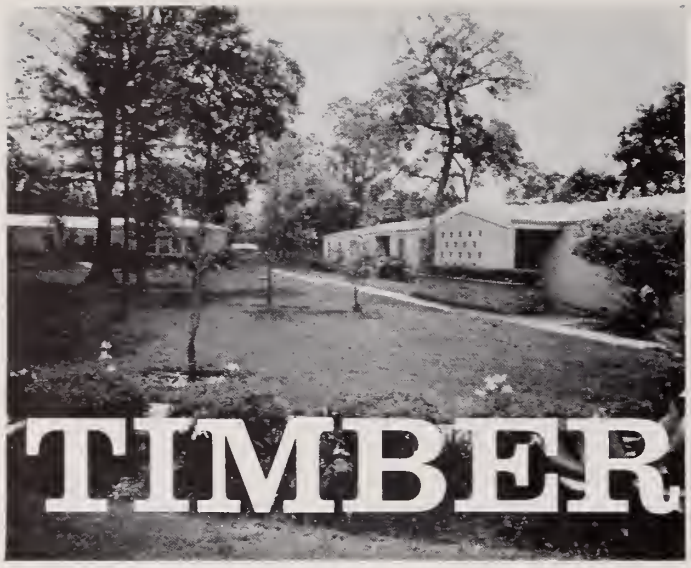
NTZ Nasal Spray is also useful in vasomotor (allergic) rhinitis and sinusitis. It is best used twice within five minutes. Supplied in leakproof, pocket-size, squeeze bottles of 20 ml. and in bottles of 30 ml. with dropper.

*Levin, S. J.: **Pediat. Clin. North America** 1:975, Nov., 1954.

NTZ, Neo-Synephrine (brand of phenylephrine), Thenfadil (brand of thenyldiamine) and Zephiran chloride (brand of benzalkonium chloride, refined), trademarks reg. U.S. Pat. Off.

Winthrop

WINTHROP LABORATORIES, NEW YORK 18, N.Y.



PSYCHIATRIC HOSPITAL

DAY HOSPITAL

DEPARTMENT OF OUT PATIENT PSYCHIATRY

TIMBERLAWN FOUNDATION
For Education and Research in Psychiatry

Narcotic Cases Not Admitted

TIMBERLAWN
PSYCHIATRIC CENTER

PERRY C. TALKINGTON, M.D.
Psychiatrist In Chief

CHARLES L. BLOSS, M.D.
Medical Director

HOWARD M. BURKETT, M.D.
Clinical Director

DONALD BERTOCH, M.A.
DAVID LIPSHER, Ph.D.
JEAN HUBBARD, B.S.
Clinical Psychology

Associate Psychiatrists
JAMES K. PEDEN, M.D.
WARD G. DIXON, M.D.
JERRY M. LEWIS, M.D.
CLAUDE L. JACKSON, M.D.
E. CLAY GRIFFITH, M.D.
BELVIN A. SIMMONS, M.D.
ALBERT F. RIEDEL, M.D.
JOHN HENRY REITMAN, M.D.

Business Manager
RALPH M. BARNETTE, JR., B.B.A.

BILL M. TURNAGE, M.S.S.W.
ROBERT L. COATES, M.S.S.W.
WELDON EBELING, M.S.S.W.
Social Work

GERALDINE SKINNER, B.S., O.T.R.
Director of Occupational Therapy

LOIS TIMMINS, Ed.D.
Director of Recreational Therapy

FRANCES LUMPKIN, R.N., B.S.
Director of Nurses

EVergreen 1-2121 Dallas 21, Texas P. O. Box 1769

INDEX TO ADVERTISERS

Abbott Laboratories 12, 13
Ames Company, Inc. 18

Bayer Company, The 8
Browne-McHardy Clinics 30
Burroughs Wellcome & Co. 7, 24, 25

Chicago Medical Society 32

Davies, Rose & Co., Ltd. 10

Endo Laboratories 11

First Texas Pharmaceuticals, Inc. 20

Katz & Besthoff, Ltd. 1

Lederle Laboratories 19
Leeming & Co., Inc., Thos. 28
Lilly & Company, Eli Front Cover, 16
Louisiana Coca-Cola Bottling Co. 1
Louisiana State Board of
Health Second & Third Covers

Majors Company, J. A. 1

Parke, Davis & Company 4, 5
Peacock Surgical Co., Inc. 30
Pfizer Laboratories 22, 23
Poythress & Company, Inc., Wm. P. 14, 34
Professional Cards 39, 40

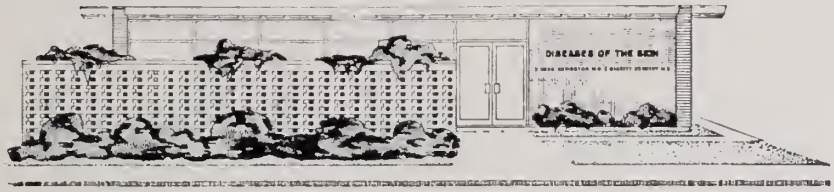
Robins Company, A. H. 3, 31
Roche Laboratories Back Cover
Roerig & Co., Inc., J. B. 26, 27

Schering Corporation 15
Searle & Company, G. D. 17
Silver Hill Foundation, The 32
Smith Kline & French Laboratories 33
Squibb & Sons 36

Timberlawn Psychiatric Center 38

Wallace Laboratories 9, 21, 35
Winthrop Laboratories 2, 6, 29, 37

PROFESSIONAL CARDS



Courtesy
Parking
Adjacent
to Building

BARRETT KENNEDY, M. D.

V. MEDD HENINGTON, M. D.

WM. J. PERRET, M. D.
(Associate)

DERMATOLOGY

4522 MAGNOLIA STREET

TWinbrook 1-4452 — 1-4453

Green Clinic

709 South Vienna Street — Ruston, Louisiana

Surgery
Marvin T. Green, M.D.
LaMoyne C. Bleich, M.D.

Obstetrics and Gynecology
Carl L. Langford, M.D.
David M. Hall, M.D.

Pediatrics
Bruce W. Everist, M.D.
O. Wharton Brown, Jr., M.D.

Eye, Ear, Nose and Throat
Harold H. Harms, M.D.

Radiology
M. Ragan Green, M. D.

Internal Medicine
Henry S. Roane, M.D.
Robert W. Sharp, M.D.
Joe L. Smith, Jr., M.D.

Dentistry
L. Felton Green, D.D.S.
Benjamin C. Baugh, D.D.

The Baton Rouge Clinic

134 North 19th St. — DI 8-5361

SURGERY
J. Sabatier, M. D.
Charles Mosely, M. D.
Charles S. Peter, Jr., M. D.

GYNECOLOGY & OBSTETRICS
Melvin Schudmak, M. D.
J. P. Griffon, M. D.
Donald C. Diefendorf, M. D.

UROLOGY
Mortimer Silvey, M. D.

GENERAL PRACTICE
Shirley J. Woodford, M. D.

INTERNAL MEDICINE
Charles Prosser, M. D.
Roger Reynolds, M. D.
(Allergy)
Bruce L. Baer, M. D.
(Gastroenterology)
Douglas Gordon, M. D.
(Endocrinology)
David D. Kahn, M. D.
(Hematology)

EYE
George H. Jones, M. D.

PHILIP RONALD LORIA, M. D.

DISEASES OF THE SKIN

Dermoplaning — **Removal of Excessive Hair**

1104 Maison Blanche Bldg. — New Orleans 16, La.
By Appointment — 524-9621

PROFESSIONAL CARDS

JOHN C. HARDIN, JR.
D.D.S., M.D., F.A.C.S.
Maxillo-Facial & Oral Surgery
(Head and Neck Surgery)
121 Physicians & Surgeons Bldg., West
Phone 3-6901 Shreveport, Louisiana

DR. NATHAN H. POLMER
Physical Medicine—Rehabilitation
2209 Carondelet St.
2 - 5 P. M.
Off.: JA 2-0171 Res.: JA 2-3946

JAMES W. BURKS, JR., M. D.
DISEASES OF THE SKIN
SURGICAL PLANING FOR COSMETIC DEFECTS
FACILITIES FOR REMOVAL OF SUPERFLUOUS HAIR
925 Maison Blanche Bldg.
New Orleans 16, La. 529-3322

DR. R. ROSS, JR.
SKIN DISEASES
802 Pere Marquette Bldg. JA 2-0202

DR. RICHARD W. VINCENT
PLASTIC AND RECONSTRUCTIVE SURGERY
34 Maes Court — Medical Plaza
3600 PRYTANIA STREET
TWinbrook 5-4561

LEWELL C. BUTLER, JR., M. D.
PLASTIC AND RECONSTRUCTIVE SURGERY
Phone 3-9671
211-213 Physicians and Surgeons Building West
803 Jordan Street Shreveport, Louisiana

JUSTILLIEN H. FORET, M. D.
Practice Limited to Psychiatry
3706 Prytania Street
899-2618 By Appointment

CHARLES I. BLACK, M. D.
DISEASES OF THE SKIN
4550 North Boulevard Dickens 3-2841
Baton Rouge, Louisiana

BLAISE SALATICH, D.D.S., M.D.
PRACTICE LIMITED TO ORTHOPEDIC SURGERY
1212 Maison Blanche Building
JAckson 2-7697 By Appointment

THE OWENS CLINIC
for
PLASTIC AND RECONSTRUCTIVE SURGERY
2223 Carondelet St. New Orleans 13, La.
Telephone: JAckson 2-0106
After Hours — Call Doctors' Exchange WH 5-4141

DR. HARTWIG M. ADLER
EYE, EAR, NOSE AND THROAT
Hours by appointment.
3439 Prytania Street TW. 1-4094
New Orleans

DR. CARL N. WAHL
Practice limited to
MAXILLO-FACIAL AND PLASTIC SURGERY
4500 Magnolia Street 891-6615

FRANK H. MAREK, M. D.
Radiologist
444 So. Ryan Street Lake Charles, La.
Phone HE 3-6361
Practice Limited to
X-ray and Radium Treatment and Diagnosis

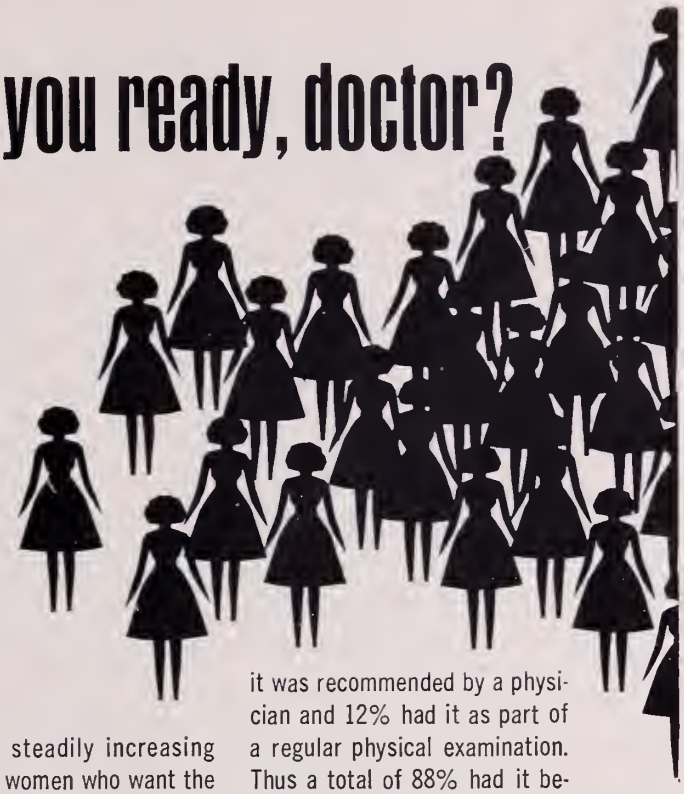
DR. HARRY ZOLLER
HEARING AND DEAFNESS
DISEASES AND SURGERY OF THE EAR
1109 Pere Marquette Building
JA. 5-2535 By Appointment

JOHN H. COUNCE, M. D.
Diseases of the Skin
1413 Delachaise St. New Orleans
Office Hours
By Appointment TW 1-2813

FREDERIC W. BREWER, M. D.
PRACTICE LIMITED TO PSYCHIATRY
1008 Maison Blanche Building
JA 5-4047 By Appointment

The Cancer Commission of the Louisiana State Medical Society

are you ready, doctor?



...for the steadily increasing number of women who want the "Pap" smear as part of their regular checkups? By 1961, the number who had this cytologic examination had climbed to an estimated 10,000,000!

While the American Cancer Society's educational program has succeeded in alerting women to the vital importance of the "Pap" smear, it is the physician who plays the key role. This was confirmed in a recent survey of women who had had the "Pap" smear. It was revealed that 76% had it because it was recommended by a physician and 12% had it as part of a regular physical examination. Thus a total of 88% had it because of physicians' actions.

As the number of uterine cytological examinations rises, the death rate from uterine cancer declines. Many authorities estimate that most deaths from this disease could be eliminated if these examinations were routinely performed. More and more women are ready for it and are willing to budget time and money for it. Are you ready for them, doctor?

AMERICAN CANCER SOCIETY®

LOUISIANA DIVISION, INC.

204 Delta Building New Orleans 12, La.

Louisiana State Board of Health

W. J. REIN, M.D., President

specific for anxiety & tension

Librium

The singular specificity of Librium in controlling anxiety and tension has proven to be an advantage in a wide range of disorders characterized by anxiety of varying degrees. Notably effective in patients whose symptoms are primarily emotional, Librium is equally valuable when organic disease is aggravated or prolonged by accompanying anxiety. Coupled with its effectiveness is an outstanding record of safety. Librium has few, if any, of the unwanted side effects associated with tranquilizers and daytime sedatives—no extrapyramidal effects, no autonomic blocking, and no dulling of mental alertness. Consult literature and dosage information, available on request, before prescribing.

the successor to the tranquilizers

LIBRIUM® Hydrochloride—7-chloro-2-methylamino-5-phenyl-3H-1,4-benzodiazepine 4-oxide hydrochloride



ROCHE

AL of the

LOUISIANA STATE MEDICAL SOCIETY

EBRUARY, 1963

LOUISIANA STATE MEDICAL SOCIETY

Formerly NEW ORLEANS MEDICAL and SURGICAL JOURNAL

OFFICIAL ORGAN OF THE LOUISIANA STATE MEDICAL SOCIETY

Copyright 1963 by
na State Medical Society.
per annum, 35¢ per copy

Vol. 115, No. 2

Published monthly by
The Journal of the Louisiana State
Medical Society, Inc.
1430 Tulane Ave., New Orleans 12

Contents

A Critical Look at Oral Poliovaccine ... 33
Margaret H. D. Smith, M. D., New Orleans

Review of the Louisiana State Board of Health Experience with the Use of Salk Vaccine and Comments on the Sabin Oral Polio Vaccine ... 41
Andrew Hedmeg, M. D., M.P.H., New Orleans

Glaucoma: Medical Versus Surgical Therapy ... 48
George M. Haik, M. D., and George S. Ellis, M. D., New Orleans

Resuscitation in the Doctor's Office ... 57
Edward M. Foster, M. D., Monroe



Solitary Pulmonary Nodules: Diagnosis and Treatment ... 61
Albert H. St. Raymond, Jr., M. D., New Orleans

Editorial ... 65

Organization Section ... 68

Medical News Section ... 69

Book Reviews ... 71

Index to Advertisers ... 40

ANNUAL MEETING — MAY 6-8, 1963 — NEW ORLEANS

A TRULY SCIENTIFIC
APPROACH TO COUGH THERAPY

SINGLE-ENTITY, NON-NARCOTIC

NOVRAD®

(levopropoxyphene, Lilly) (as the napsylate)

EFFECTIVELY CONTROLS USELESS COUGH WITHOUT ADDED OPIATES

This is a reminder advertisement. For adequate information for use, please consult manufacturer's literature. Eli Lilly and Company, Indianapolis 6, Indiana.

Lilly

345517

FEB 1963 LIBRARY

Announcing

The Twenty-Sixth Annual Meeting

of

THE NEW ORLEANS GRADUATE MEDICAL ASSEMBLY

Conference Headquarters — Roosevelt Hotel

March 4, 5, 6, 7, 1963

GUEST SPEAKERS

John R. Haserick, M. D., Cleveland, Ohio
Dermatology

Henry J. Tumen, M. D., Philadelphia, Pa.
Gastroenterology

Logan T. Robertson, M. D., Asheville, N. C.
General Practice

Andrew A. Marchetti, M. D., Washington, D. C.
Gynecology

Raymond D. Pruitt, M. D., Houston, Tex.
Internal Medicine

Paul S. Rhoads, M. D., Chicago, Ill.
Internal Medicine

C. H. Hardin Branch, M. D., Salt Lake City, U.
Neuropsychiatry

J. Robert Willson, M. D., Philadelphia, Pa.
Obstetrics

James I. Moore, M. D., Baltimore, Md.
Ophthalmology

James E. Bateman, M. D., Toronto, Ont., Can.
Orthopedic Surgery

Joseph H. Ogura, M. D., St. Louis, Mo.
Otolaryngology

Edward A. Gall, M. D., Cincinnati, Ohio
Pathology

Col. F. M. Townsend, MC, USAF, Wash., D. C.
Pathology

Weston M. Kelsey, M. D., Winston-Salem, N. C.
Pediatrics

Curtice Rosser, M. D., Dallas, Tex.
Proctology

Ted F. Leigh, M. D., Atlanta, Ga.
Radiology

John L. Keeley, M. D., Chicago, Ill.
Surgery

John L. Madden, M. D., New York, N. Y.
Surgery

Edwin P. Alyea, M. D., Durham, N. C.
Urology

Lectures, symposia, clinicopathologic conferences, round-table luncheons, medical motion pictures, technical exhibits and entertainment for visiting wives.

(All-inclusive registration fee — $20.00)

Sponsored in cooperation with the Louisiana Chapter of the American Academy of General Practice. Acceptable for twenty-nine (29) hours Category I Credit.

THE CLINICAL TOUR TO MEXICO VISITING MEXICO CITY, CUERNAVACA, TAXCO AND ACAPULCO

Leaving March 8 via air and returning March 23, 1963
(Optional extensions may be arranged)

For information concerning the Assembly meeting and tour write Secretary, Room 105, 1430 Tulane Avenue, New Orleans 12, La.

Louisiana State Board of Health

W. J. REIN, M.D.,

President



BOTTLED UNDER AUTHORITY OF THE COCA-COLA COMPANY BY
THE LOUISIANA COCA-COLA BOTTLING CO., LTD.



You Know--

that we know!

TRUSTED MANY MILLIONS OF TIMES

GOOD DRUG STORES — ONLY THE BEST

Katz & Besthoff, Inc.

Prescription Headquarters Since 1905

MEDICAL BOOKS

Of All Publishers

Any book on Medicine, Surgery, and Nursing

J. A. MAJORS COMPANY

147 South Liberty St.

NEW ORLEANS 12, LA.

——Catalogs cheerfully sent upon request——

ANNUAL MEETING

Louisiana State Medical Society

MAY 6-8, 1963

NEW ORLEANS

In intestinal "grippe"

prompt 4 way check of diarrhea

- Curbs excessive peristalsis
- Adsorbs toxins and gases
- Soothes inflamed mucosa
- Provides intestinal antisepsis



POMALIN

TRADEMARK

Liquid

EFFECTIVE ANTIDIARRHEAL

FORMULA: *Each 15 cc. (tablespoon) contains:*

Sulfaguanidine U.S.P.	2 Gm.
Pectin N.F.	225 mg.
Kaolin	3 Gm.
Opium tincture U.S.P.	0.08 cc.
(equivalent to 2 cc. paregoric)	

DOSAGE: **Adults:** Initially 1 or 2 tablespoons from four to six times daily, or 1 or 2 teaspoons after each loose bowel movement; reduce dosage as diarrhea subsides.

Children: ½ teaspoon (=2.5 cc.) per 15 lb. of body weight every four hours day and night until stools are reduced to five daily, then every eight hours for three days.

SUPPLIED: *Bottles of 16 fl. oz. (raspberry flavor, pink color)*
Exempt Narcotic. Available on Prescription Only.

Winthrop LABORATORIES
New York 18, N. Y.

Before prescribing be sure to consult Winthrop's literature for additional information about dosage, possible side effects and contraindications.





"cleared head–able to breathe through nose"...or how another happy patient describes the nasal decongestant action of Dimetapp Extentabs.* How would your patients describe it?/In Sinusitis, Colds, U.R.I., up to 10-12 hours' clear breathing on one tablet (containing Dimetane® [brompheniramine maleate], 12.0 mg.; phenylephrine HCl, 15.0 mg.; phenylpropanolamine HCl, 15.0 mg.)./Also available: Dimetapp Elixir, for t.i.d. or q.i.d. dosage. **Dimetapp® Extentabs®**

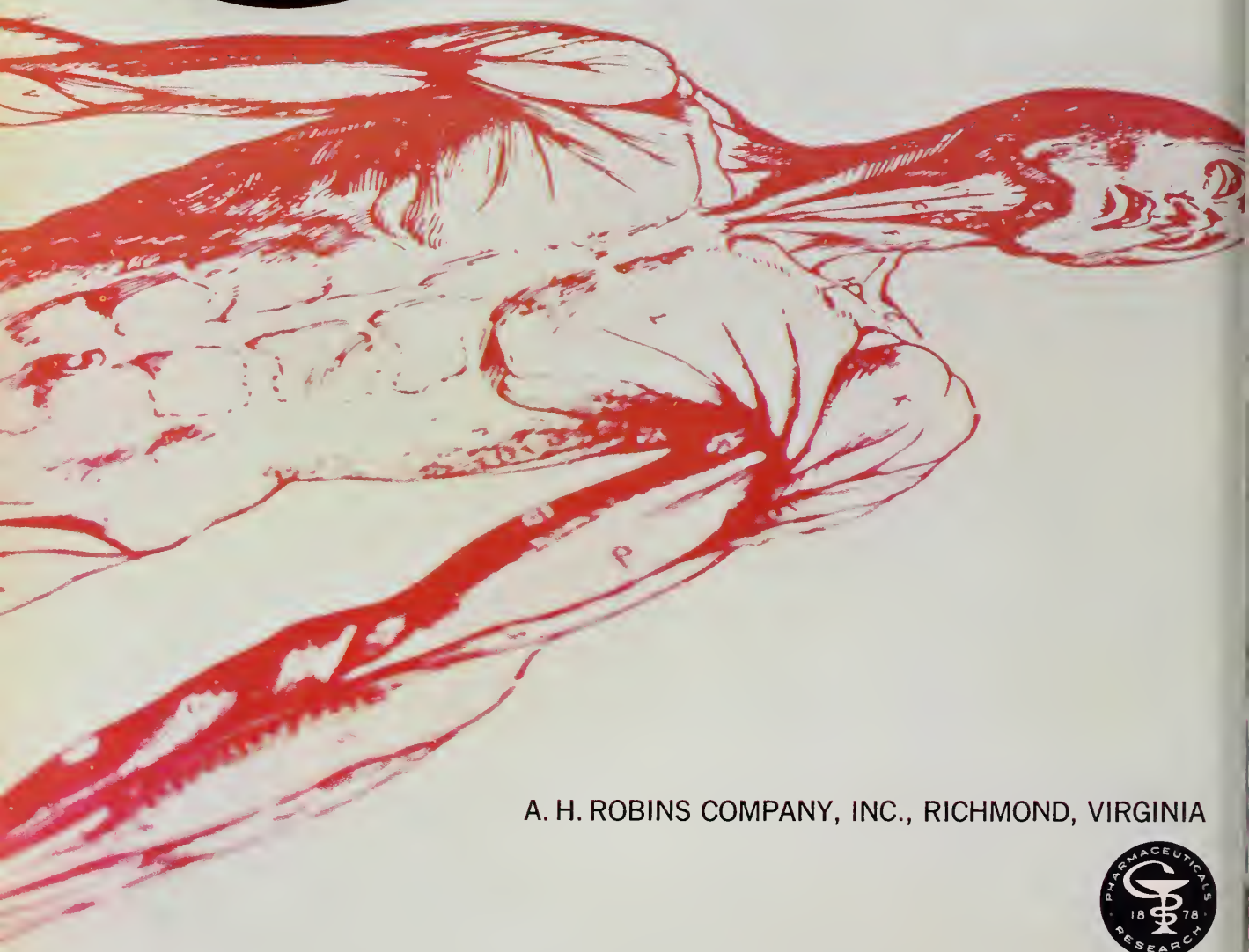
A. H. ROBINS CO., INC., RICHMOND 20, VA.

*Clinical report on file, Medical Dept., A. H. Robins Co., Inc.

A new, chemically different, skeletal muscle relaxant from Robins:

Skelaxin® brand of metaxalone for prompt relief of spasm





A. H. ROBINS COMPANY, INC., RICHMOND, VIRGINIA

PHARMACEUTICALS 1878 RESEARCH

in acute sprains and strains

Because it acts so promptly, often within a few hours, Skelaxin is specifically recommended for the first treatment of acute muscle spasm associated with sprains and strains, fractures, dislocations, and other acute conditions. Results of clinical tests are impressive. In 595 patients with acute disorders, a favorable clinical response was observed in 507, or 85%.

For some of these patients, the onset of relief from pain was exceptionally prompt. Also, the average recovery time of good-or-excellent-response patients (among those whose recovery time was noted) was just over three days.

How Skelaxin works...

Metaxalone has been studied pharmacologically since 1958. Clinical trials began about a year later. These investigations indicate that Skelaxin blocks reflex spasm and spasticity by suppressing nerve impulses in polysynaptic pathways, primarily in the spinal cord and to a lesser degree at supraspinal levels. It helps restore normal muscle tone without altering posture or gait and without producing sedative, hypnotic, or tranquilizing side effects.

For your prescription...

Robins' metaxalone is available in 400-mg. tablets, in bottles of 50 and 500 tablets.

Skelaxin® metaxalone, 400 mg. per tablet

A. H. Robins Company, Inc., Richmond, Va.

prescribing information:

dosage: For Skelaxin, two tablets t.i.d. or q.i.d. for not longer than 10 days. Dosage for children (6 to 12 years) should be adjusted according to body weight.

side effects: In 1502 patients given daily doses of Skelaxin ranging from 1200 to 9600 mg., 10.5% experienced side effects. These were generally mild, with nausea or gastrointestinal upset being most frequent. Only 0.5% experienced vomiting attributable to the drug, however. Other effects infrequently noted were drowsiness, dizziness, headache, nervousness or "irritability," and a hypersensitivity reaction of light rash. All cleared promptly upon withdrawal of the drug.

precautions: Variations in white cell count and hemoglobin levels have been reported in a few patients. Therefore Skelaxin therapy for more than 10 days is not recommended. A drug relationship was indicated in one of four cases of leukopenia reported in 360 Skelaxin-treated patients. In all cases followed-up, the WBC returned to normal after discontinuance of Skelaxin.

One instance of hemoglobin depression (less than 10 Gm.) which may have been drug-related was reported, in 306 patients; a return to an essentially normal level followed the discontinuance of medication.

One case of jaundice has been reported. Elevation of cephalin flocculation tests in several instances were not paralleled by changes in other liver function parameters. Urinalyses in 280 patients were essentially normal; false positive Benedict's tests, due to an unknown reducing substance in the urine, were reported in 9 patients.

contraindications: Do not administer to patients with known tendency to drug-induced anemia, or give to them only under careful supervision. Not recommended for use during pregnancy.

Robins

in severe respiratory infections
refractory to other measures

CHLOROMYCETIN®

(chloramphenicol, Parke-Davis)

for established
clinical efficacy against
susceptible organisms



In Friedlander's Pneumonia[3,13]

Although the prognosis in Friedlander's pneumonia is poor, treatment with CHLOROMYCETIN has shown a good response when susceptible strains of *Klebsiella pneumoniae* are incriminated.

In *Hemophilus Influenzae* Pneumonia[3,4,13,14]

Because the invading organism is usually sensitive to CHLOROMYCETIN, this agent is generally effective in pneumonias caused by *H. influenzae*.

In Staphylococcal Pneumonia[1-8,13]

CHLOROMYCETIN continues to remain effective against many resistant strains of staphylococci, and—alone or in combination with other antibiotics—should be considered when other antistaphylococcal drugs are ineffective.

In Acute Epiglottitis[4,10,11]

This condition is most often caused by *H. influenzae,* most strains of which are sensitive to CHLOROMYCETIN. Therapy should be instituted at once, since the disease may progress from the first symptoms to a severe respiratory obstruction in four to six hours.

In Pneumonias Due to Gram-negative Bacilli[9]

Because of its broad-spectrum activity, CHLOROMYCETIN is often effective in pneumonias caused by sensitive strains of *Aerobacter, Proteus* of various species, *Paracolobactrum,* and other gram-negative pathogens encountered with increasing frequency in serious respiratory tract infections.

In Staphylococcal Empyema[12]

The infiltrating lesions of staphylococcal empyema are often difficult to eradicate. While CHLOROMYCETIN should only be used when the infection has been resistant to treatment with other antistaphylococcal drugs, therapy with CHLOROMYCETIN, in conjunction with surgical procedures, will often bring favorable results.

CHLOROMYCETIN (chloramphenicol, Parke-Davis) is available in various forms, including Kapseals® of 250 mg., in bottles of 16 and 100. See package insert for details of administration and dosage.

Warning: Serious and even fatal blood dyscrasias (aplastic anemia, hypoplastic anemia, thrombocytopenia, granulocytopenia) are known to occur after the administration of chloramphenicol. Blood dyscrasias have occurred after both short-term and prolonged therapy with this drug. Bearing in mind the possibility that such reactions may occur, chloramphenicol should be used only for serious infections caused by organisms which are susceptible to its antibacterial effects. Chloramphenicol should not be used when other less potentially dangerous agents will be effective, or in the treatment of trivial infections such as colds, influenza, or viral infections of the throat, or as a prophylactic agent.

Precautions: It is essential that adequate blood studies be made during treatment with the drug. While blood studies may detect early peripheral blood changes, such as leukopenia or granulocytopenia, before they become irreversible, such studies cannot be relied upon to detect bone marrow depression prior to development of aplastic anemia.

References: (1) Thacher, H. C., & Fishman, L.: *J. Maine M. A.* **52**:84, 1961. (2) Hopkins, E. W.: *Postgrad. Med.* **29**:451, 1961. (3) Hall, W. H.: *M. Clin. North America* **43**:191, 1959. (4) Krugman, S.: *Pediat. Clin. North America* **8**:1199, 1961. (5) Ede, S.; Davis, G. M., & Holmes, F. H.: *J.A.M.A.* **170**:638, 1959. (6) Wolfsohn, A. W.: *Connecticut Med.* **22**:769, 1958. (7) Calvy, G. L.: *New England J. Med.* **259**:532, 1958. (8) Hendren, W. H., III, & Haggerty, R. J.: *J.A.M.A.* **168**:6, 1958. (9) Cutts, M.: *Rhode Island M. J.* **43**:388, 1960. (10) Berman, W. E., & Holtzman, A. E.: *California Med.* **92**:339, 1960. (11) Vetto, R. R.: *J.A.M.A.* **173**:990, 1960. (12) Sia, C. C. J., & Brainard, S. C.: *Hawaii M. J.* **17**:339, 1958. (13) Rosenthal, I. M.: *GP* **17**:77 (March) 1958. (14) Gaisford, W.: *Brit. M. J.* **1**:230, 1959.

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit 32, Michigan

03863

Solfoton®

for mild, continuous sedation

Each tablet (or capsule) contains 16 mg. phenobarbital blended with 65 mg. Bensulfoid®. The Bensulfoid is an inert diluent present to permit slow absorption of the phenobarbital. The usual dosage is one tablet or capsule after meals and at bedtime. Solfoton is especially adapted to prolonged use because of its virtual freedom from depression and other side effects. Contra-indications: identical to those of ¼ gr. phenobarbital.

REFER TO PDR

Poythress, White Section, Page 808 (1963 edition) and Product Identification Section

COMPLETE INFORMATION AND CLINICAL SAMPLES SENT UPON REQUEST

Dispensed in bottles of 100 and 500 tablets or capsules

WM. P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA

Manufacturers of ethical pharmaceuticals since 1856

RELIEVE THE COLD SUPPRESS THE COUGH WITH NEW

'EMPRAZIL-C'

TABLETS

ANTITUSSIVE ▪ DECONGESTANT ▪ ANALGESIC

Each tablet contains:

Codeine Phosphate*	15 mg.
'Sudafed'® brand Pseudoephedrine Hydrochloride	20 mg.
'Perazil'® brand Chlorcyclizine Hydrochloride	15 mg.
Acetophenetidin	150 mg.
Aspirin (Acetylsalicylic Acid)	200 mg.
Caffeine	30 mg.

*Warning—may be habit forming.

Complete literature available on request.



Also available without codeine as

'EMPRAZIL'®

TABLETS

BURROUGHS WELLCOME & CO. (U.S.A.) INC., TUCKAHOE, N.Y.

PROFESSIONAL MANAGEMENT SERVICE CAN HELP YOU BE A

FULL-TIME DOCTOR



Delegation of time-consuming work not requiring your training and experience releases you to more productive and rewarding work only you can do. The Professional Management Service is equipped to save you time . . . to relieve you and your staff of both menial and critical business tasks . . . and to increase your income. Our service offers you the benefits of specially trained, and equipped personnel under the careful supervision of specialists in medical business management, however you maintain complete control of your business activities!

We Offer These Services -

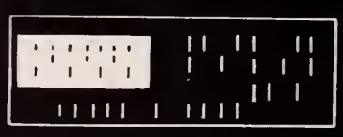
ACCOUNTS RECEIVABLE MANAGEMENT Professional Management Service trained bookkeepers, electric equipment and modern, proven-in-use methods designed to the needs of medical accounts are used to minimize the business workload in your office. Professional, accurate, itemized statements encourage prompt payment. This service pays big dividends in good will, time savings and net dollar return.

CONSULTATION Professional Management Service also includes special services, as needed, such as counseling on all insurance, investments, office personnel, fees, office lay-out, etc.

BASIC BOOKKEEPING SERVICE Formal accounting records are maintained by Professional Management Service. This includes income and expenses, depreciation, capital accounts, monthly financial report and tax return preparation.

PRE-COLLECTION PROGRAM A constructve approach to slow-paying accounts, subject to your control, this service is used with the ARM Service, above, or to supplement billing by your own staff. Custom designed to your needs and policies, but all time-consuming work is done by Professional Management Service.

COMPREHENSIVE BUSINESS SERVICE Most beneficial to physicians is the assumption of the complete business side of practice by the Professional Management Service in a co-ordinated, comprehensive service encompassing all functions named above.



PROFESSIONAL MANAGEMENT SERVICE

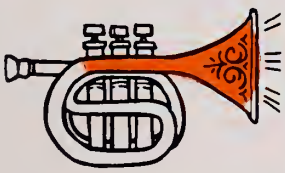
New Orleans, Louisiana

700 MAISON BLANCHE BLDG., PHONE 524 1177

A Specialized Service . . . Exclusively Professional

EVERYBODY DOES IT





Toot! We have a nice little bargain, too...

Accustomed as we are to talking about purity, potency, stability, things like that, we thought you might like to know that mothers can make a nice saving on Vi-Daylin Chewables for the next few weeks. Nothing complicated. She buys a bottle of 100 at the regular price. She gets a bottle of 30 free. Big deal? Well, not a bad one. It means she's getting her Vi-Daylin for less than 3¢ per daily dose per child. You might find some vitamins somewhere that would cost even less. But will the youngsters take them?

Vi-Daylin—Vitamins A, D, B_1, B_2, B_6, B_{12}, C, and Nicotinamide. Abbott

ABBOTT 75TH ANNIVERSARY

301079



These Chewables Taste as Good as They Look

(AND THEY'RE SUGAR-FREE, THANKS TO SUCARYL®)

First cousin to an orange. Next door neighbor to a lemon – that's new VI-DAYLIN® CHEWABLE with *Entrapped* Flavor.

They look like footballs and smell like candy and you've never tasted a chewable vitamin quite like them. What surprises you is not so much what you taste as what you *don't* taste. Vitamins. They simply don't come through – either in taste or aftertaste. Even the riboflavin is trapped and civilized.

Our dual coating process does it – seals the raw vitamin tastes, protects the delicate flavoring agents. Releases the sweet citrus flavor in the mouth, the vitamins in the g-i tract. With *both* vitamins and flavors entrapped, there's just no chance of the tablets turning musty in the bottle.

Rational formula. And sweetened with sugar-free SUCARYL.

If they look good to you, imagine what youngsters will think.

75TH ANNIVERSARY ABBOTT



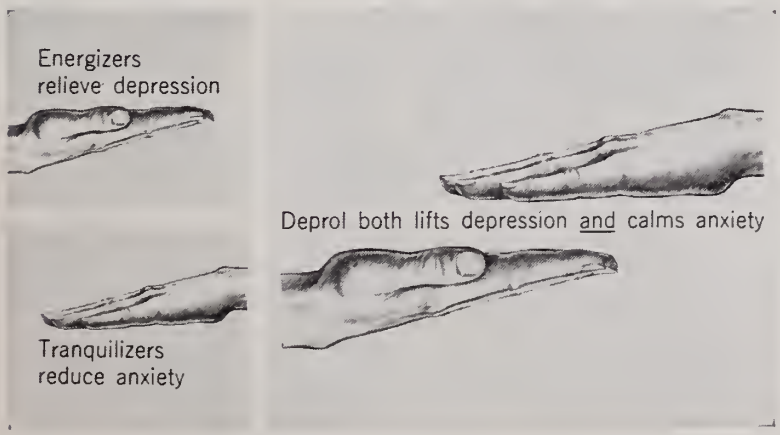
SUCARYL–Abbott's Non-Caloric Sweetener.
VI-DAYLIN–Vitamins A, D, B_1, B_2, B_6, B_{12}, C, and Nicotinamide, Abbott.

LIFTS DEPRESSION ...AS IT CALMS ANXIETY



"I feel like my old self again!" Balanced Deprol therapy has helped relieve her insomnia and fatigue – her normal energy, drive and interest have returned.

Brightens mood...relaxes tension



CD-7393

Dosage: Usual starting dose is 1 tablet q.i.d. When necessary, this may be increased gradually up to 3 tablets q.i.d. With establishment of relief, the dose may be reduced gradually to maintenance levels.

Composition: 1 mg. 2-diethylaminoethyl benzilate hydrachloride (benactyzine HCl) and 400 mg. meprobamate.

Supplied: Bottles of 50 light-pink, scored tablets.

Write for literature and samples.

▲Deprol▲®

WALLACE LABORATORIES
Cranbury, N. J.



rom tsutsugamushi in Malaya to otitis media in Louisiana

ere is a world of experience behind BRAND OF OXYTETRACYCLINE **Terramycin®**



Whether treating tsutsugamushi or a host of other infections, physicians throughout the world continue to rely on TERRAMYCIN for its outstanding safety, effectiveness and excellent tolerability. Not a single case of phototoxic reaction, blood dyscrasia or neurologic disturbance directly attributable to TERRAMYCIN has been reported in more than 3,000 clinical papers in the last 12 years. *In your practice, the next infection you see will very likely be "Terra-responsive."*

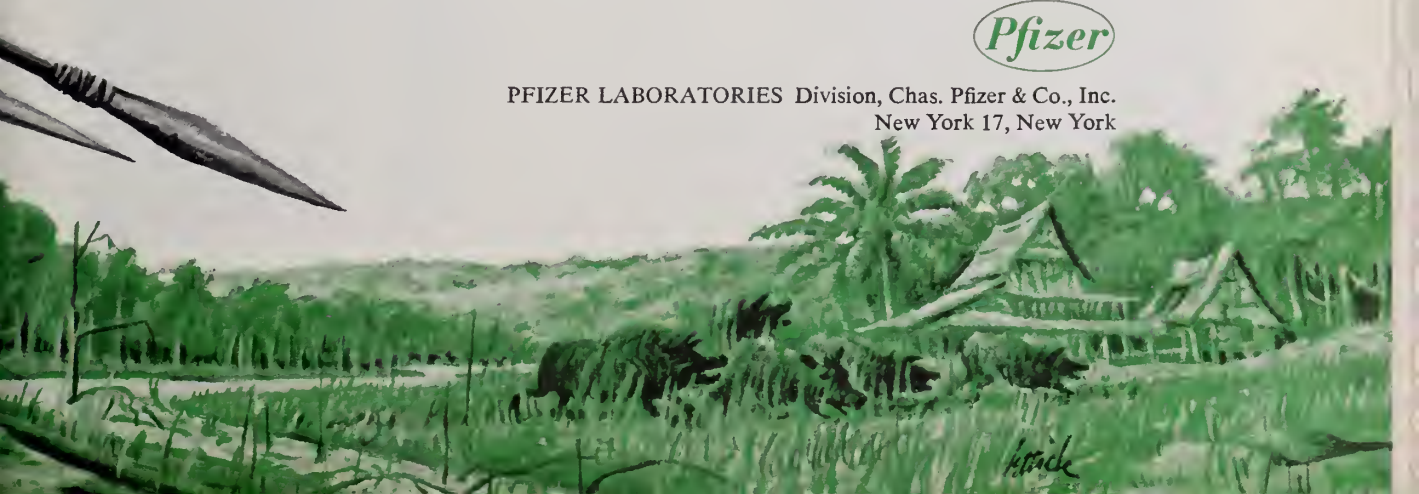
Tsutsugamushi, or scrub typhus, was responsible for incapacitating nearly 7,000 American soldiers during World War II. This disease is prevalent in areas overrun by jungle rats infested with mites carrying *Rickettsia tsutsugamushi.* Symptoms include a primary lesion at the site of the mite-bite, fever reaching as high as 105°, and a cutaneous rash. Injected conjunctivae, deafness, delirium and racking cough mark the advance of the disease. Mortality rates as high as 60 per cent have been reported. Terramycin is one of the antibiotics of choice for rapid and effective control of the acute stage of the infection. Patients become afebrile and virtually asymptomatic 24 to 36 hours after beginning treatment.

IN BRIEF The dependability of Terramycin in daily practice is based on its broad range of antimicrobial effectiveness, excellent toleration, and low toxicity. As with other broad-spectrum antibiotics, overgrowth of nonsusceptible organisms may develop. If this occurs, discontinue the medication and institute appropriate specific therapy as indicated by susceptibility testing. Glossitis and allergic reactions to Terramycin are rare. For complete information on Terramycin dosage, administration, and precautions, consult package insert before using. *More detailed professional information available on request.*

Science for the world's well-being®

Pfizer

PFIZER LABORATORIES Division, Chas. Pfizer & Co., Inc.
New York 17, New York



Thorazine® is not an analgesic
brand of chlorpromazine

but it can help you relieve the suffering of your patient in PAIN . . .

by reducing the anxiety and fear that intensify pain

by potentiating analgesics—enabling you to reduce narcotic dosage by 50 to 75%

and by controlling nausea and vomiting.

'Thorazine' is particularly useful in the severe pain seen in your cancer, surgical, and obstetrical patients. It is available in a wide variety of dosage forms, including injection, Spansule® sustained release capsules, suppositories, syrup and tablets.

For prescribing information, please see *PDR* or SK&F literature.

SK&F *Smith Kline & French Laboratories*

Photograph professionally posed.



Bockus — Gastroenterology
Volume I — Just Published!

New (2nd) Edition! The first volume of this highly respected 3-volume work has been completely revised. The entire set of books will cover every known disease and condition of the gastrointestinal tract and associated organs. The author emphasizes a sound clinical approach to each problem, and carefully explains the causes and mechanisms responsible for each complaint. *Volume I* incorporates all important advances in therapy for diseases of the *esophagus and stomach*. New chapters are included on topics such as: *Oral Manifestations of Internal Disease; Tests Employed in the Study of Esophageal Function and Disease*. More than 150 pages are devoted to modern methods of diagnosis and management of peptic ulcer, with special emphasis on complications. A particularly significant new section shows endoscopic views of the esophagus and stomach, in magnificent color.

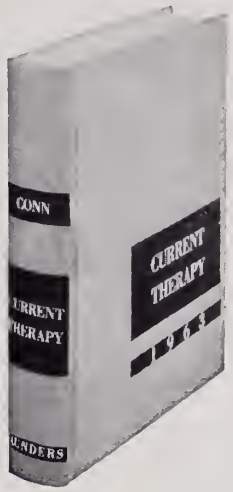
By HENRY L. BOCKUS, M.D., Emeritus Professor of Medicine, University of Pennsylvania Graduate School of Medicine. With Contributions by 31 Former and Present Associates of the University of Pennsylvania Schools of Medicine. Three Volumes totalling about 3000 pages, 7″x10″, about 600 illustrations, some in color. *Volume I, Esophagus and Stomach*, 958 pages, 298 illustrations, $25.00, *Just Published. Volume II, ready August, 1963. Volume III, ready January, 1964. New (2nd) Edition!*

Meares — Management of the Anxious Patient

New! Here is a clearly written guide giving you specific instructions on managing patients suffering from anxiety or from disorders that may be based on emotional conflict or stress. Dr. Meares describes and explains the steps he uses in therapy. In a personal, informal presentation, devoid of esoteric jargon, the author tells you from what sources anxiety may spring. He shows you how anxiety can often be resolved without digging into your patient's past for childhood or infantile conflicts. He tells you *how to conduct the interview—how to elicit evidence of conflict—how to conduct the physical examination—how to use suggestion, drugs, etc.—how to avoid common treatment errors*. Dr. Meares describes the symptoms of anxiety as they appear in each body system. He also shows you how to manage anxiety in obstetrics, pediatrics and surgery.

By AINSLIE MEARES, M.D., D.P.M., Author of *The Medical Interview, A System of Medical Hypnosis, The Door of Serenity, Shapes of Sanity, Marriage and Personality, Hypnography*, and *The Introvert*. About 496 pages, 6″x9¼″. About $9.00. *New—Just Ready!*

Today's Best Treatments



1963 Current Therapy

Here are the surest, most effective treatments known to medical science today for every disease you are likely to encounter. New and important changes in treatment for hundreds of diseases are detailed—diseases you may well be called on to treat within the year. Each is written specifically for *1963 Current Therapy* by an authority who is using it today.

This volume represents an extensive revision. Nearly 70% of the articles are changed in a significant manner. Among the 197 rewritten and revised articles you'll find: *Newer penicillins in the treatment of meningitis*—Treatment of whooping cough in the young infant—*Control of antibiotic-resistant staphylococci*—Newer knowledge of oral iron therapy—*Latest information on treatment of hepatitis*—Newest advice on treatment of adrenal insufficiency—*Action of sterols (Vitamin D and related agents)*—Management of conditions causing enuresis—*Relationship of hyperparathyroidism to urinary calculi*—Milk-alkali (Burnett's) syndrome—*Steroid spray in nickel dermatitis* — Elevated shoulder syndrome as a cause of headache—*Enzymes in management of postphlebitic syndrome* —Treatment of coma with analeptic drugs.

By 306 EMINENT AUTHORITIES Selected by a Special Board of Consultants. Edited by HOWARD F. CONN, M.D. About 864 pages, 8″x10½″. About $13.00. *New—Just Ready!*

Order from W. B. SAUNDERS COMPANY

West Washington Square
Philadelphia 5

Please send me the following books and bill me: ☐ Easy Pay Plan ($5 per mo.)

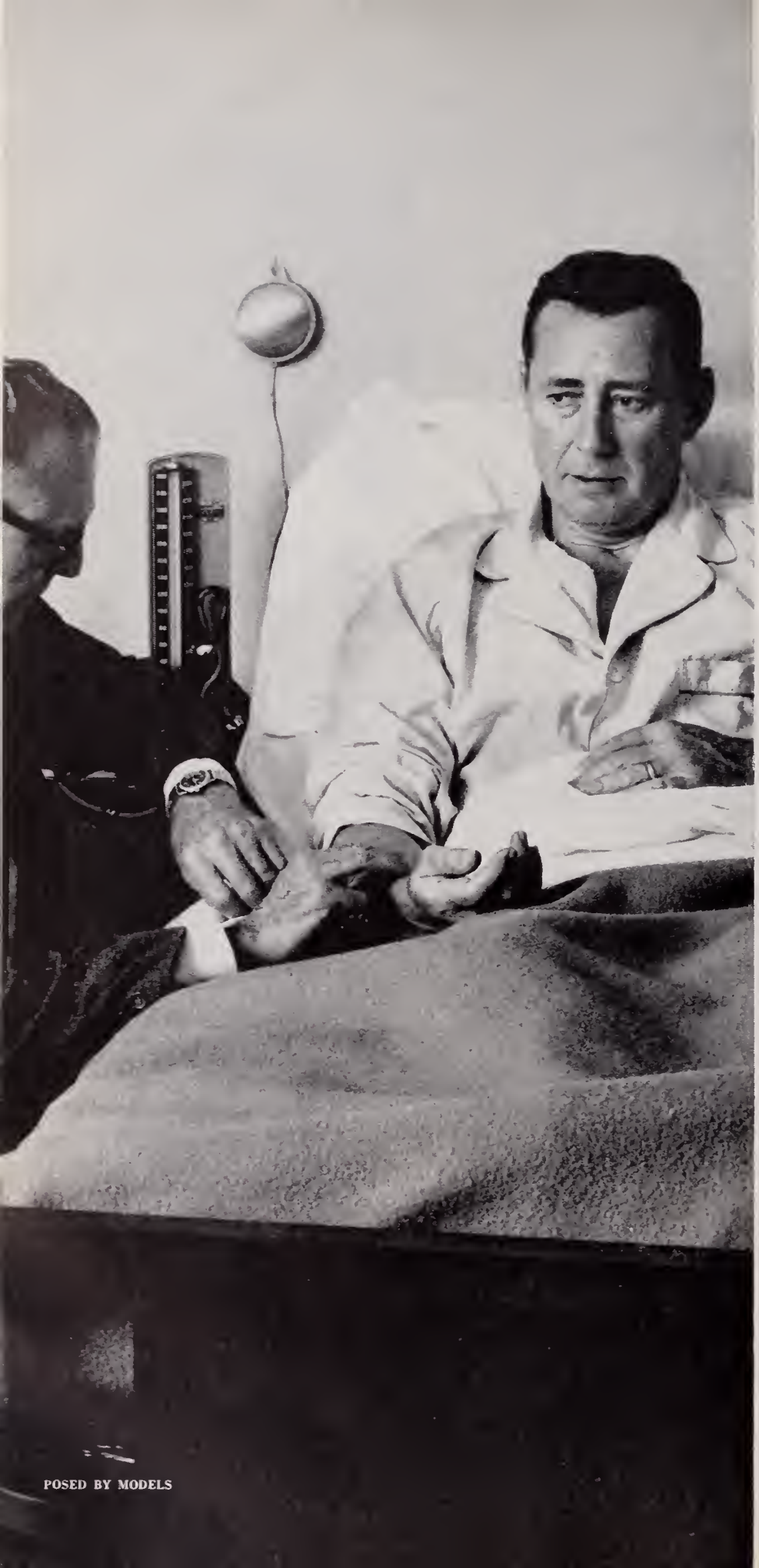
- ☐ 1963 Current Therapy, about $13.00
- ☐ Bockus' Gastroenterology, Volume I, $25.00
 - ☐ Send Volumes II and III when ready
- ☐ Meares' Management of the Anxious Patient, about $9.00

Name_____

Address_____

Saunders Books

SJG-2-63



POSED BY MODELS

O



all things considered

in bronchitis—Considering the pattern of mixed bacteria, localized or diffuse involvement, potential underlying disease, and the need to allay symptoms and ease respiratory/cardiac function... physicians often include DECLOMYCIN demethylchlortetracycline in the course of therapy.

DECLOMYCIN produces activity levels higher than those of other tetracyclines... at lower dosage... and maintains them during the entire course of treatment without significant fluctuation.

This activity is prolonged 24 to 48 hours after the last dose, helping to protect against relapse.

Over the wide range of everyday infections—respiratory, urinary and most others—in the young and the aged—the acutely or chronically afflicted—DECLOMYCIN provides the "extra dimension" in broad spectrum control.

the decision is for

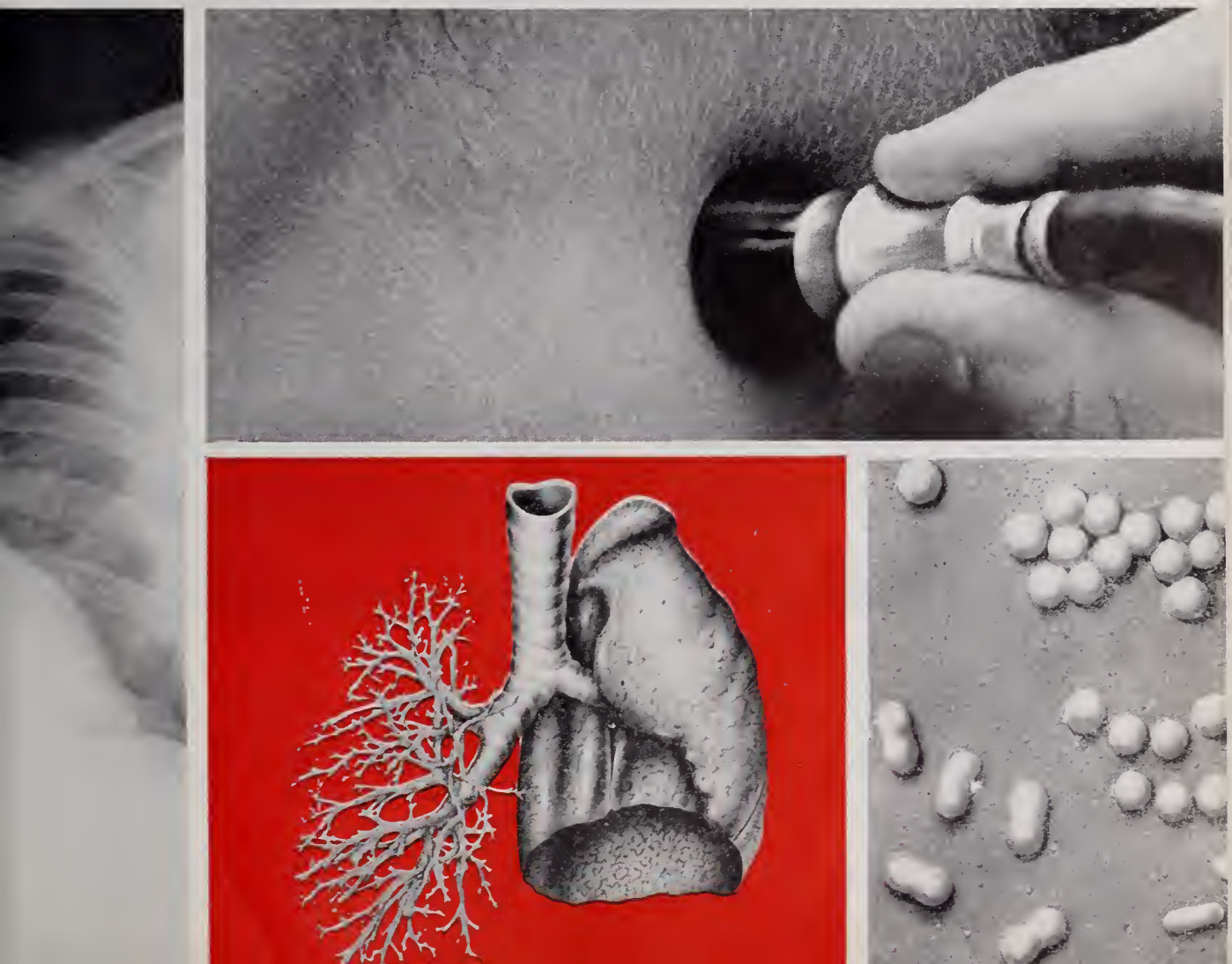
For *adults: Capsules*, 150 mg. and 75 mg. For *children:* cherry-flavored *Pediatric Drops*, 60 mg./cc., and cherry-flavored *Syrup*, 75 mg./5 cc. Request complete information on indications, dosage, precautions and contraindications from your Lederle representative, or write to Medical Advisory Department.

DECLOMYCIN®

DEMETHYLCHLORTETRACYCLINE LEDERLE

LEDERLE LABORATORIES • A Division of AMERICAN CYANAMID COMPANY • Pearl River, N. Y.

Lederle





Cleanliness is more than a virtue at Lilly; it is a routine. It starts with vacuum-cleaning the drums filled with raw material even before they enter a Lilly warehouse. It is the first of an endless list of rules that have become a way of life for Lilly employees. Although meticulous housekeeping has little to do with technical know-how, it adds immeasurably to the quality of the finished product.

Eli Lilly and Company · Indianapolis 6, Indiana, U.S.A.

Lilly

390016

The Journal

of the

Louisiana State Medical Society

$4.00 Per Annum, 35c Per Copy
Vol. 115, No. 2

FEBRUARY, 1963

Published Monthly
1430 Tulane Avenue, New Orleans 12, La.

A Critical Look at Oral Poliovaccine*

• The author gives a scholarly presentation of the advantages and disadvantages of the Salk and the Sabin vaccines with recommendations.

MARGARET H. D. SMITH, M. D.
New Orleans

THERE is no doubt that the development of effective vaccines against poliomyelitis, both of the killed (or Salk type) vaccine and of the attenuated (or Sabin type) vaccine are among the greatest achievements of contemporary preventive medicine. In the 1940's, at a time when the outlook for an antipoliomyelitis vaccine seemed poor, came the break-through, namely the cultivation of poliomyelitis virus in tissue culture by John Enders.[1] Since both types of vaccine depend on tissue culture, Dr. Enders stands *in loco parentis,* so to speak, to both.

In order to clarify our thoughts about the two types of vaccine presently available, I propose to discuss each separately, presenting for each a systematic and somewhat detailed account of the advantages and drawbacks, both theoretical and practical, insofar as they are known to us as of October 1, 1962.

Salk Vaccine

Any attempt to evaluate the live Sabin type poliomyelitis vaccine might properly be preceded by a consideration of the inactivated Salk type vaccine and what it has accomplished over the past few years.

The inactivated or Salk type vaccine first became available in 1954. There seems by now no reasonable doubt that its use over this past eight year period has brought about the dramatic fall in incidence of paralytic poliomyelitis which can be appreciated in the accompanying illustrations.

Table 1 shows the incidence of poliomyelitis in Louisiana, Orleans Parish and the entire United States respectively during a time before any vaccine was available—or even deemed feasible to prepare. While the year 1947 showed a relatively low incidence of cases, there were for the U. S. as a whole almost 11,000 cases even in that year.

Table 2 shows another five year period with a dismally large number of cases, and the beginning availability of the inactivated Salk type vaccine still making no apparent inroads on the disease.

Only really in 1957 as shown in Table 3, does the number of cases drop sharply below the preceding eleven year period. As successive years have passed, with the downward trend maintained and even accentuated, there can be no reasonable doubt that the widespread vaccination is indeed effective, and finally, Table 4 shows

* Presented at the Orleans Parish Medical Society, New Orleans, October 9, 1962.

From the Departments of Pediatrics and Epidemiology, Tulane University School of Medicine, New Orleans.

TABLE 1.
POLIOMYELITIS CASES BY YEAR, SHOWING TOTAL NUMBER,
FOR STATE OF LOUISIANA, PARISH OF ORLEANS AND UNITED STATES

	LOUISIANA				PARISH OF ORLEANS				UNITED STATES	
	Paralytic		Non-Paralytic		Paralytic		Non-Paralytic			
YEAR	Total	Vacc.	Total	Vacc.	Total	Vacc.	Total	Vacc.	Total	Paralytic
1946	382				62				25,698	Not Av'lb.
1947	54				0				10,827	Not Av'lb.
1948	168				13				27,726	Not Av'lb.
1949[1]	227				55				42,033	Not Av'lb.
1950	278		131		24		11		33,300	Not Av'lb.

1. No distinction in Louisiana between paralytic & non-paralytic prior to this year.

TABLE 2.
POLIOMYELITIS CASES BY YEAR, SHOWING TOTAL NUMBER,
NUMBER VACCINATED*, FOR STATE OF LOUISIANA, PARISH OF ORLEANS
AND UNITED STATES

	LOUISIANA				PARISH OF ORLEANS				UNITED STATES	
	Paralytic		Non-Paralytic		Paralytic		Non-Paralytic			
YEAR	Total	Vacc.	Total	Vacc.	Total	Vacc.	Total	Vacc.	Total	Paralytic
1951	578		289		22		6		28,386	10,037
1952	618		258		83		36		57,879	21,269
1953	209		229		30		20		35,592	15,648
1954[2]	319	1	218	1	40	0	7	0	38,476	18,308
1955[3]	242	10	141	23	33	0	8	1	28,985	13,850

* Persons having received one or more injections Salk Vaccine.
2. Salk Vaccine Field Trials in Bossier, Caddo & Rapides parishes in 2nd grade pupils only.
3. NFIP Vaccination program—1st and 2nd grades only—April thru September.

TABLE 3.
POLIOMYELITIS CASES BY YEAR, SHOWING TOTAL NUMBER,
NUMBER VACCINATED*, FOR STATE OF LOUISIANA, PARISH OF ORLEANS
AND UNITED STATES

	LOUISIANA				PARISH OF ORLEANS				UNITED STATES	
	Paralytic		Non-Paralytic		Paralytic		Non-Paralytic			
YEAR	Total	Vacc.	Total	Vacc.	Total	Vacc.	Total	Vacc.	Total	Paralytic
1956	414	39	194	51	93	6	13	3	15,140	7,911
1957	74	17	95	49	24	4	0	–	5,485	2,499
1958	55	13	20	13	8	1	0	–	5,787	3,697
1959	106	32	30	20	7	2	1	1	8,425	6,289
1960	32	18	17	10	2	1	0	–	3,190	2,525
1961	44	21	8	6	13	3	2	1	1,327	864

* Persons having received one or more injections Salk Vaccine.

TABLE 4.
POLIOMYELITIS, 1ST THROUGH THE 38TH WEEK (1958-1962)

	1958	1959	1960	1961	1962
Paralytic	1,680	3,771	1,446	557	436
Total	3,433	5,950	2,111	849	559

the record to date for this year through September 22nd, compared to previous years.

This record speaks for itself and it is, I believe, an impressive one. While I am about to discuss a whole series of drawbacks of this inactivated vaccine, nothing which I am about to say can invalidate this record of achievement.

Disadvantages

Disadvantages to the inactivated vaccine there are, however:

In the first place, even with repeated administration of vaccine, there are still instances of clinical infection with poliomyelitis virus, both with and without paralysis, and even with death due to poliomyelitis virus. Table 3 shows for Louisiana

and for Orleans Parish that quite a few of the patients had received at least one injection of vaccine, and some had received as many as four. Similar experience has been reported from many other areas, so that the vaccine is not always to be relied upon to prevent infection. Many members of this Society will well remember that, in the early and agonizing phases of producing this difficult vaccine, sufficiently delicate tests were not at hand to standardize the "inactivation" precisely, and deaths occurred; subsequent batches of vaccine were, for a time, excessively "in activated", and, particularly around 1957, many individuals were inoculated with vaccine of very low potency. The situation at the present time is much more satisfactory. However the fact remains that it has not so far been feasible to produce "safe" Salk vaccine of high antigenic potency. Therefore, until some method is developed for producing such a vaccine, we are going to be condemned to a schedule of frequent "booster" doses of Salk vaccine which is the current recommendation of the Committee on Control of Infections of the American Academy of Pediatrics.[2] Even *with* such a schedule of inoculations repeated at short intervals throughout life, there will likely be some deaths from poliomyelitis among vaccinated individuals.

Multiple doses of Salk vaccine, currently produced commercially in the U.S.A., often fail to produce an adequate antibody response and the persistence of the antibody is dependent on the level originally produced. However, even high levels of antibody produced in some children by four doses of Salk vaccine failed to influence in any way the extent of viral multiplication in the intestinal tract. No evidence was found that previous immunization with Salk vaccine results in an accelerated antibody response to multiplication of orally administered polioviruses, and there is therefore no theoretical basis for expecting long-lasting immunity from a formalinized vaccine after the initially produced antibody has disappeared.[3]

Not only is the total number of injections perhaps quite important, but the timing also may be. In a recent number of the British Medical Journal, Selwyn[4] reports a family outbreak of type 1 poliovirus. Although 3 of the 4 children in the family had had 3 and 1 had had 4 injections of Salk type vaccine, one contracted severe paralytic polio and 2 others developed non-paralytic illness; the authors draw attention to the apparently rather critical interval between injections, and to the variability in antigenic potency of different lots of vaccine.

Now of course such repeated inoculations may not be themselves without danger and here we come to a disadvantage of this vaccine which, so far, has been purely a theoretical one, namely the possibility that repeated injections of the monkey kidney cells in which the polio virus is grown will give rise to anti-kidney antibodies in the human host. This complication of the vaccine has not, so far, to our knowledge, been recognized in humans; however, the greater the number of injections, the larger the total amount of kidney protein injected, and the greater likelihood of an immune response with possibly devastating effects on the host's own kidney tissue.

One of the sad things about the inactivated Salk type vaccine is, that while it protects the individual, in most cases, against invasion of his blood and nervous system by poliovirus, it does not keep him from being a carrier of poliovirus repeatedly during his lifetime, and thereby endangering others in this immediate environment. Because he is immune, he may spread the virus for some time, just like an individual convalescent from the disease.

Yet another drawback of this vaccine concerns us with respect to young infants. Cramblett and Fomon[5] of Iowa reported in the Journal of Pediatrics in 1961 that an appreciable number of infants of less than eight weeks of age at the time of the first Salk injection will not respond with satisfactory antibody titers even after the fourth injection given at fifty-seven to sixty-four weeks of age. A titer

of passively transferred antibody of 1.16 or greater at the time of the first injection seems to interfere with the response to active immunization. Other workers have reported identical findings.

To sum up the situation with regard to inactivated or Salk type vaccine, its seemingly undeniable advantage seems to be its proven record of effectiveness in lowering the incidence of paralytic disease over the past six to seven years. Its numerous disadvantages include: the occurrence of cases of poliomyelitis and deaths from poliomyelitis in people who have been at pains to take one or several injections of vaccine; the need for repeated inoculations to maintain immunity; the inefficacy of the vaccine in young infants born to highly immune mothers; the need for repeated inoculations probably throughout life; the theoretical danger of so many injections of monkey kidney protein; the persistence of the virus carrier state with potential hazard to contacts.

Attenuated Poliomyelitis Vaccine

Now with this background of the experience with the inactivated vaccine in mind, let us look at the situation with respect to the attenuated poliomyelitis vaccine.

First, just in case we feel that this type of vaccine is completely new, let us remember that the very first type of prophylactic inoculation used in the Western World was the smallpox virus vaccine, attenuated by passage through cows. This vaccine has been used in millions of people ever since it was introduced by Jenner in 1796. It has been remarkebly safe, remarkedly effective, and has *never* given rise to smallpox by back mutation from the attenuated to the virulent strain of virus. In a sense then, the live attenuated poliomyelitis vaccine harks back to the oldest and most tried type of vaccine available to us today.

The licensing of live attenuated vaccine for general use represented the culmination of a tremendous amount of work by several groups of investigators, including many individuals. The Lederle Laboratories group under the leadership of Herald Cox and Hilary Koprowski, as well as Sabin and his co-workers all deserve great credit for the present state of our knowledge.

The trick was to take live "wild" virus of each of the 3 types, as obtained directly from infected human beings or laboratory animals and, by passing the virus many times in tissue culture, to select out certain virus particles which were less virulent than the parent or "wild" strain. Some of the tremendous problems which were encountered, and which had to be solved, concerned the choice of tissue cultures for virus attenuation, the methods of testing for virulence, and the problem of contamination of the tissue cultures by viruses other than the virus under culture, in particular by monkey viruses.

Several enormous mass vaccination programs were carried out in various parts of the world and received much publicity in our newspapers. However, it was not until August 17, 1961, that Type I oral vaccine was licensed in this country for distribution in interstate commerce. Type II vaccine followed on October 19, 1961; and Type III on March 27, 1962. Most of the vaccine has been used in community wide vaccination programs in various parts of the country; some has been used by private practitioners and in health department clinics. Since it was recommended that Type I be fed first and because many programs did not start until late spring, much more Type I vaccine appears so far to have been administered than is true for either Types II or III.

It is estimated that to date 20,456,000 doses of Type I vaccine have been administered since licensure; 6,622,000 doses of Type II; and 13,494,000 doses of Type III.[6]

Advantages of Sabin

Now for the advantages of the attenuated, so-called Sabin oral vaccine. Several can be listed:

(1). In the first place the ease of administration; it is true that careful refrigeration is necessary but the actual administration of the vaccine in sugar syrup

or on a lump of sugar requires minimal equipment, no skill, no care of equipment.

(2). No foreign protein is injected.

(3). Probably repeat or booster doses will not be required or, if they are required, the interval will be longer. Data on this point are minimal; children fed Koprowski's TN oral poliovirus vaccine in 1950 had antibodies against Type II nine years later.[7] Sabin describes persistence of homotypic virus antibody for two years, with marked local intestinal resistance to a massive dose of virus. At any rate the frequent "boosters" needed with Salk vaccine will probably *not* be needed with the oral vaccine.

(4). The type of immunity is different, in that, with the inactivated Salk vaccine, one depends on circulating antibody to stop the spread of the virus into the body; whereas with the oral vaccine local immunity is set up in the gut wall, so that virus coming along later simply will not multiply at all, and there is therefore less tendency to the carrier state.

Now we come to the three *outstanding advantages* of this type of vaccine.

(5). The main one is that it offers hope of actual eradication of poliomyelitis once and for all through the mechanism known as interference. Interference can be defined as the ability of a virus to preempt the metabolic processes of a given group of cells in such a way as to render these cells unable, at that time, to support the multiplication of certain other viruses related to the first one. For example, vaccinia virus interferes with smallpox virus and that is why mass vaccination can be used in the face of an impending smallpox epidemic. Certain respiratory viruses interfere with each other; but respiratory viruses do not interfere with pox viruses, nor do pox viruses interfere with enteric viruses like polio.

Now the basic hope of mass vaccination with oral polio vaccine is that by saturating the entire population, infants and adults of all ages, whether previously immunized or unimmunized, the attenuated virus strain will multiply in the gastrointestinal tract of such a large segment of the population, that the "wild", virulent strains will no longer find new hosts in which to propagate and will therefore disappear forever from the entire population. And, remember, this is essentially the situation with regard to smallpox: we no longer have virulent smallpox virus in our population.

Now is there any valid evidence that this may happen? Yes, there is some evidence in this direction. The British Medical Journal in its March 17, 1962 number, reports the recent experience in Hungary,[8] where in December, 1959 wild strains of polio virus were isolated from children in various parts of the country. One year later, in August and October 1960, after a massive oral vaccination campaign, no polio virus was isolated from 1010 children. Also Sabin[9] reported in a much more thorough study in 1960, that over 26,000 children in the tropical city of Toluca were fed oral vaccine on two successive occasions and that polioviruses rapidly disappeared from that community.

(6). Another signal advantage of oral poliovaccine is that it can be used at the onset of an epidemic to bring the epidemic to a premature halt. The mode of action here is again interference, plus also immunization. The oral vaccine has been successfully used for epidemic control on several occasions, among others in 1961 in Syracuse, New York; in Atlanta, Georgia; in Newberry County, South Carolina; in Mobile, Alabama; in Pasadena, California; in many counties of Texas, and in several rural counties in Kentucky and Pennsylvania; also in Washington County, Virginia. The vaccine used was in some of these areas Type I, in others Type III, depending on the type responsible for the epidemic.

(7). And finally, in contrast to the inactivated vaccine, the oral vaccine can be used in newborns. The advantages in this situation are outlined by Koprowski[10] as follows:

a) The vaccine can be administered immediately by the midwife or physician who delivers the infant.

b) It is possible to give the virus to the newborn before other enteroviruses have seeded his gastrointestinal tract and set up possible interference.

c) It can be given at a time when transplacental antibodies are present, thus allowing "blending" of the passively acquired with the actively formed antibody.

d) For reasons not understood spread of virus from the less than six month old to his surroundings is rare.

Disadvantages of Oral Poliovaccine

Now for the disadvantages of the oral poliovaccine.

(1). We shall start with the simplest, namely the need to keep the virus vaccine cold, so that it will be active until actually ingested. In the mass campaigns so far undertaken on this continent and others, this has not seemed to present a serious problem.

(2). An ever present problem with all live attenuated vaccines is the possibility of contamination with other viruses, such as simian or monkey viruses. Naturally, the various batches of vaccine are subjected to a battery of tests designed to reveal the presence of other viruses, but there is always the possibility that we do not have the proper test for detecting such a virus. There is reason to guess that this may have been the case in the past with certain batches of smallpox vaccine which seemed to be particularly encephalitogenic.

(3). More important by far is the problem of interference of one vaccine strain with the other. Since each type interferes with the multiplication of the others, so it seems probable that we shall always have to resort to administering the live virus vaccine on three separate occasions spaced at least six weeks apart, so that the individual can have a chance to become infected with one type, have the inapparent disease, recover and eliminate the virus before being exposed to the next type. Now, there is always the likelihood that some people in the population are harboring other enteroviruses, non-polio viruses, at any given time, so that some people in every population will escape infection—and therefore immunity, due to interference by the enteric viruses with the oral attenuated polio virus. However, serologic studies show that after a mass vaccination campaign, 94 to 96 per cent of the population will be found to have antipolio antibodies. Because of the inevitable "misses" which are bound to occur, the British have been experimenting with administration of mixtures of 2 strains at one gulp, so to speak; however it must be emphasized that only one strain in the mixture will multiply, so that, regardless of whether a single, double or triple-strain vaccine were employed, three doses of oral vaccine would still be necessary to produce good immunity to all 3 strains in a majority of the vaccines. Sabin carried out the interesting experiment in Toluca, already alluded to, where the entire child population under age 5 received two doses of trivalent attenuated virus, depending on the strains to spread in the population and ultimately immunize all children. Sabin concludes, as did Russian investigators earlier, "that the separate segmental administration of the 3 types of vaccine at intervals of not less than four to six weeks is optimum during the cold or cool months of the year in areas with good sanitation and hygiene."

(4). Now finally we have to consider the last and greatest potential hazard of any live attenuated virus and that is the likelihood of its return to virulence, or of the laboratory tests having failed to detect virulence. Neurotropism is, of course, the characteristic we most fear. Neurotropism of the vaccine is tested in monkeys and chimpanzees. Moreover many tests have been carried out on the virus recovered from the stools of individuals fed attenuated virus, to see what happened to the virus in the course of one human passage. And, finally, tests have been carried out in institutions for the mentally retarded where inmates were intimately exposed to another group which had been fed virus. The data[3] indicate "that a certain proportion of the viral population (more so with type 3 than types 1 and 2) *is* less

attenuated than that which was ingested" but "that the less attenuated virus is not selectively propagated in the human alimentary tract, as is evident from the disappearance of such virus after prolonged multiplication in the intestinal tract of the original vaccinees, and the failure to find progressive increase in neurotropism after further multiplication in the intestinal tract of naturally exposed contacts, or after repeated experimental passages in human beings."

Now what about the actual experience in this country? Ever since August, 1961, when the first polio vaccine was licensed, the Public Health Service has placed particular stress on the evaluation of reported cases of poliomyelitis after vaccine use. In epidemic control a number of cases of disease among vaccinees must be expected. On the other hand cases developing seven to thirty days after vaccine administration are highly suspicious. In actual fact there have been 62 cases of poliomyelitis distributed among types 1 and 3, developing after oral vaccine since August 1961. Of these 62, the majority occurred within six days, one was due to a different strain of virus than the one which had been fed. There remain 12 cases, 1 following feeding of type I and II following feeding of type III which appear, to have been vaccine induced. "The 11 cases considered as possibly related to Type III vaccine feeding are between 16 and 52 years of age, with all but 3 of the cases over 30. The vaccine administered to this group of cases was from several lots and was not produced by any single manufacturer. Of the 11 cases, 3 occurred in Oregon, 3 in Nebraska, 2 in Michigan, 2 in Ohio and 1 in New York State." The incidence, assuming all cases to have been vaccine induced, is but 11 cases among more than 13 million fed. This is less than one case per million doses given. When the risk is related to age, it is apparent that adults are exposed to a greater hazard than are children.[6] Even so, these figures establish oral poliovaccine as one of the safest of all vaccines presently available.

Spread of Vaccine Viruses

One more point is of paramount importance, and I cannot class it as an advantage or a disadvantage, but only as a fact and that is the *fact* of *spread*, and I quote Sabin:[3] "Spread of the vaccine viruses to others is an accepted fact in the immunization with live poliovirus vaccines." It is this fact of spread, plus the unwillingness to have the vaccine virus turned loose to spread in series through many members of the population, which has led the Committee on Control of Infectious Diseases of the Academy of Pediatrics to unanimously recommend, on the one hand, mass campaigns with saturation of the entire population with oral polio vaccines; and, on the other hand, to recommend withdrawal of the Type III until further studies can be carried out concerning its safety. This Committee has unanimously expressed its hope that, because of the several advantages which the live oral poliovaccine has over the killed vaccine, the community-wide vaccination programs will continue using types I and II vaccine; and that the present questions about the safety of the Type III component will soon be clarified.

The world over some 60 million people have been vaccinated with oral attenuated polioviruses. At the rate of even one case of paralytic poliomyelitis per million vaccines (and the actual rate appears to be much lower), this would still be the safest immunizing agent available today. It is also, happily, one of the cheapest.

References

1. Enders, J. F., Weller, T. H., and Robbins, F. C.: Cultivation of Lansing strain of poliomyelitis virus in cultures of various human embryonic tissues. Science 109:85, 1949.

2. Am. Acad. Ped., Comm. Control Infect. Dis.: Report, Evanston, Ill., 1961.

3. Sabin, A. B.: Present position of immunization against poliomyelitis with live virus vaccines. Brit. M. J. 1:663, 1959.

4. Selwyn, S.: Poliomyelitis in an "immunized" family. Brit. M. J. 2:148, 1962.

5. Cramblett, H. G., and Fomon, S. J.: Unpredictability of antibody response of infants to injections of Salk poliomyelitis vaccine. J. Ped. 58:779, 1961.

6. Terry, Luther L.: The association of cases of poliomyelitis with the use of type III oral poliomyelitis vaccines. Technical Report, United States Department of Health, Education and Welfare, Sept. 20, 1962.

7. Plotkin, S. A.; Jervis, G.; Norton, J.; Stokes, J., Jr.; Koprowski, H.: Persistence of antibodies after

vaccination with living attenuated poliovirus. J.A.M.A. 170:8, 1959.

8. Dömök, I.; Molnár, E.; Jancsó, A.; and Daniel, M.: Enterovirus survey in children after mass vaccination with live attenuated polioviruses. Brit. M. J. 1:743, 1962.

9. Sabin, A. B.; Ramos-Alvarez, M.; Alvarez-Amesquita, J.; Pelon, W.; Koch, M. A.; Barnes, J. M. and Rhim, J. S.: Live, orally given poliovirus vaccine. Effects of rapid mass vaccination on population under conditions of massive enteric infection with other viruses. J.A.M.A. 173:1521, 1960.

10. Koprowski, H.: Historical aspects of the development of live virus vaccines in poliomyelitis. Am. J. Dis. Child. 100:428, 1960.

Who Buys Pirated U. S. Drugs? The Government Does

The American pharmaceutical industry spends millions of dollars every year in the research and development of new products. . . . After these drug products have been perfected, after painstaking research, they are then patented with the U. S. Government, and thereby the manufacturers of these products have the exclusive right to manufacture and license this drug product over a period of years. Many nations, Italy, for example, do not have patent laws pertaining to drug or pharmaceutical formulas. Now, what happens? The very formulas developed here in the United States of America, after untold effort and the expenditure of millions of dollars, and then patented with our U. S .Patent Office, and thereby the manufacturers are guaranteed the exclusive rights of manufacture, these formulas are pilfered; they are stolen; they are purchased from very dubious sources, with a complete disregard of the valid patent in existence. The Italian drug manufacturers, for example, proceed to manufacture this product. Who is the biggest purchaser of these bootleg drugs made from pirated formulas? The U. S. Government. We compound this lack of ethics by being the biggest purchaser of bootleg drugs.—Representative Richard L. Roudebush (R., Ind.) during debate on defense appropriation bill, April 18, 1962.

Review of the Louisiana State Board of Health Experience with the Use of Salk Vaccine and Comments on the Sabin Oral Polio Vaccine*

• The author reviews the Louisiana status in regard to the types of vaccine and the recommendations of the Louisiana State Board of Health.

ANDREW HEDMEG, M. D., M.P.H.†
New Orleans

Introduction

AS a matter of record, we would like to acknowledge the fact that although we are making this presentation at the request of Dr. C. W. Mattingly in his capacity as Chairman of the Orleans Parish Medical Society's Committee on Public Health, of which I am a member, this paper does not express the views of that Committee since neither he nor any of the other members have seen the tables and charts that I am about to present much less had a chance to review or discuss the notes or comments contained herein.

However, I do believe it does follow the conservative approach to this problem that was established at the Committee meetings we had earlier in the year that resulted in the joint statement of this society along with the State Medical Society, the State Pediatric group, as well as the State Board of Health and the New Orleans Health Department which I am sure all of you have seen. Furthermore, I want to make it clear that—particularly since we have one of our own State Board of Health members here with us on the program—this in no way should be interpreted as an official statement or policy of the Louisiana State Board of Health since neither the State Health Officer nor any of the Board members have been briefed on its contents.

In general, we intend to follow an outline based on the title, beginning with an analysis of the Louisiana State Board of Health experience with Salk vaccine using a few charts or tables that I believe you will find rather interesting, followed by some personal observations and remarks on the Sabin vaccine based on country-wide official data and reports that have been made available to our agency. These will include our own opinion on what has transpired and what is going on in Louisiana at the present.

Review of Louisiana Experience Sequence of Tables

Table 1. Shows the reported incidence of polio in Louisiana for the period 1952 through 1961 by total cases, broken down into paralytic and non-paralytic with total rates by year. Also the number of immunizations reported by the parish health units *as given in their clinics only* since the original field trials of Salk vaccine that were participated in by three Louisiana parishes in 1954.

Table 2. Shows reported cases and deaths with rates by year between 1952-1962 in two five-year periods for the parish of Orleans. These can be considered for all practical purposes the immediate pre- and post-Salk periods.

Table 3. A graphic line and bar chart which very closely shows the progress made in Louisiana between 1955-1960 in the reduction of polio cases and deaths with Salk vaccine. This is superimposed on the number of health unit clinic reported total immunizations and booster doses of vaccine.

* Presented at the Orleans Parish Medical Society Meeting, October 9, 1962.

† Director, Division of Local Health Services, New Orleans.

TABLE 1
REPORTED POLIOMYELITIS CASES AND POLIOMYELITIS IMMUNIZATIONS
ADMINISTERED BY THE PARISH HEALTH UNITS
LOUISIANA
1952 - 1961

	CASES				IMMUNIZATIONS		
Years	Total Cases	*Rate	Paralytic	Non-Paralytic	Per Cent of Population Receiving Basic Series	Basic Series	Booster
TOTAL	3,321	**10.9	2,111	1,210	***39.9	1,070,210	1,106,455
1961	52	1.6	44	8	3.0	79,125	159,961
1960	49	1.5	32	17	4.7	123,788	148,037
1959	136	4.2	106	30	4.4	113,485	195,746
1958	78	2.4	58	20	6.4	163,523	246,495
1957	169	5.4	74	95	10.3	255,288	225,028
1956	608	19.8	414	194	10.4	253,306	128,986
1955	383	13.4	242	141	3.6	81,695	2,202
1954	537	19.0	319	218		11,148	(3 Field
1953	438	15.7	209				Trial
1952	871	31.5	613				Parishes)
				229			
				258			

* Rate per 100,000 population.
** Average annual rate.
*** Approximate per cent of the 1961 population which received basic series between 1955-1961. Immunization data does not include Orleans Parish.
* To date—October 1, 1962: Total Cases—18. Paralytic—17. Non-Paralytic—1

TABLE 2
POLIOMYELITIS CASES AND DEATHS
RESIDENTS ORLEANS PARISH
1952 - 1961

	CASES		DEATHS	
Years	Number	Rate	Number	Rate
1952	119	20.3	7	1.2
1953	50	8.4	4	0.7
1954	47	7.8	4	0.7
1955	41	6.7	0	0.0
1956	107	16.9	4	0.6
5 Year Totals	364	12.0	19	0.6
1957	24	3.7	0	0.0
1958	10	1.5	2	0.3
1959	8	1.2	1	0.2
1960	2	0.3	0	0.0
1961	15	2.4	0	0.0
5 Year Totals	59	1.8	3	0.1

Rates per 100,000 population.
Cases—Paralytic and Non-Paralytic.
* 1962—As of October 1, no cases have been reported in the Parish of Orleans.

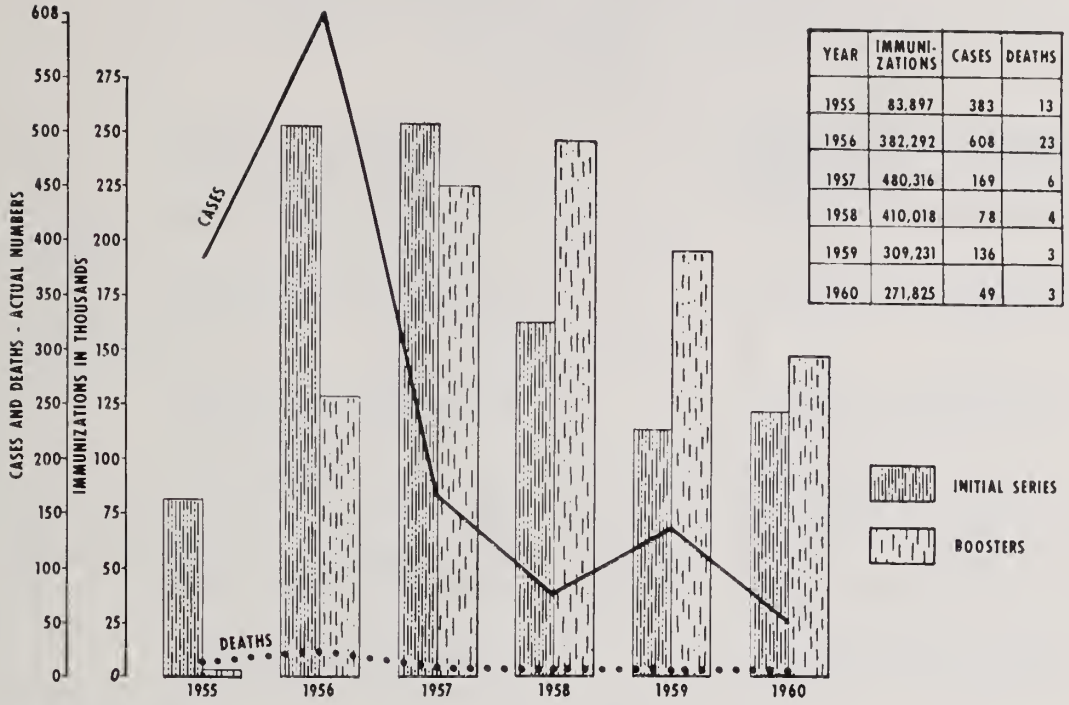
Table 4. This table gives a very interesting breakdown in case and mortality incidence as reported in two five-year periods, 1952-1956 and 1957-1961, by specific age grouping. The percentage reduction in the total case category as well as in the various age group ranges from a low of 78.4 per cent in the 25 to 34 age group to a high of 87 per cent in the 5 to 14 age group. In so far as deaths are concerned, the lowest age group is 15 to 24 with a reduction of 71.4 per cent to a high of 87.0 per cent in the 25 to 34 category. This record, we believe, speaks for itself.

Table 5. This chart, on a few national incidence figures, is shown for comparative purposes and obviously, at least, for the period shown (1956-1959) the Louisiana record parallels the national figures on incidence as well as immunization, although we did slip a bit in our 1959 rate (4.2) which was also a bad year in the country (4.8).

For thost who might be interested in individual parish results other than Orleans, we do have available statewide data by parish. However, since this was a rather last minute idea, our tabulating section did not have time to prepare such a table. But we did make the following analysis of case incidence by selected parishes for the period *1957-1961* giving us another interesting aspect of the total Louisiana experience. (Table 6)

POLIOMYELITIS
IMMUNIZATIONS - CASES - DEATHS
LOUISIANA, 1955-1960

Table III



YEAR	IMMUNI-ZATIONS	CASES	DEATHS
1955	83,897	383	13
1956	382,292	608	23
1957	480,316	169	6
1958	410,018	78	4
1959	309,231	136	3
1960	271,825	49	3

Cases include paralytic and non-paralytic cases.
Immunizations - only those administered through State Health Department.

This, obviously, means that there are 41 parishes out of a total of 64 that reported an average of less than one case per year for this five-year period.

There is another very interesting and most gratifying result from our Louisiana record which was passed on to me in a conversation with our director of the Division of Preventive Medicine while discussing this subject. Admissions to the State Board of Health Handicapped Childrens program diagnosed as sequelae of poliomyelitis infection before Salk vaccine were in the range of *25 per cent of all children seen at these clinics.* Since the vaccine program these admissions are below *10 per cent.*

Comments on Oral Vaccine

First, let us quickly go over the joint recommendations that we mentioned in the second paragraph of the introduction, and we quote:

"The poliomyelitis situation in Louisiana does not present an urgent problem at this time. Since the advent of the Salk vaccine the incidence of polio in Louisiana has steadily declined. Through July 1960, there were 23 cases of paralytic polio compared to 12 through July 1961. So far this year there were only 7 cases of paralytic polio in the state. The medical authorities in the state have a plan ready to put into operation for meeting any emergency situation that may arise in relation to polio. In the meantime the following recommendations are made."

Recommendations

1. Salk vaccine be continued for routine immunization programs, or any program where administration of vaccine is on an individual basis, since it contains all three types of virus protection and therefore affords some protection against all strains even after one or two injections. A booster of Salk vaccine should be given at least every two years.

2. The oral vaccine at present is not

Table IV

POLIOMYELITIS CASES AND DEATHS 5 YEAR TOTALS BY AGE GROUPS LOUISIANA

1952 — 1956	AGE GROUPS	1957 — 1961	PERCENT DECREASE
CASES *2,837	TOTAL	CASES 484	— 82.9
DEATHS 98		DEATHS 20	— 79.6
CASES 1,160	0-4	CASES 229	— 80.3
DEATHS 24		DEATHS 6	— 75.0
CASES 1,077	5-14	CASES 140	— 87.0
DEATHS 26		DEATHS 5	— 80.8
CASES 306	15-24	CASES 57	— 81.4
DEATHS 14		DEATHS 4	— 71.4
CASES 208	25-34	CASES 45	— 78.4
DEATHS 23		DEATHS 3	— 87.0
CASES 71	35 and Over	CASES 13	— 81.7
DEATHS 11		DEATHS 2	— 81.8

* Includes 15 cases age unknown.

recommended for administration on an individual basis except as follow-up after a mass immunization program has been accomplished in a community.

3. The oral vaccine should not be administered during the summer months except in the face of a threatened epidemic.

The following additional information

TABLE 5
POLIOMYELITIS CASES AND IMMUNIZATIONS
UNITED STATES
1956 - 1959

	CASES		IMMUNIZATIONS		
	Total	Rate	Per Cent Population 20 Years & Under Receiving Basic	Basic	Boosters
1959	8,425	4.8	4.4	3,089,869	2,107,262
1958	5,787	3.3	5.2	3,504,871	1,647,010
1957	5,485	3.2	11.5	7,578,192	4,230,877
1956	15,140	9.1	17.4	11,098,432	2,110,738

Cases include paralytic and non-paralytic for all ages.
Immunizations include only ages 20 years and under.
Source: Cases = U. S. Department of Health, Education, & Welfare.

Immunizations = Children's Bureau Statistical Series of Maternal & Child Health Services.
Rate per 100,000 population.
* Total cases in U. S., 1960—3190 1961—1312

TABLE 6
LOUISIANA CASES
1957 - 1961

7 parishes reported	0 cases during this period
9 parishes reported	1 case during this period
12 parishes reported	2 cases during this period
6 parishes reported	3 cases during this period
7 parishes reported	4 cases during this period
41	10

was mailed to all the parish health units along with the joint recommendations:

Oral vs Parenteral Vaccine

In view of the progress being made in the development of polio vaccine, the Louisiana State Board of Health recognizes the following conditions and makes the following recommendations:

Status of Parenteral and Oral Administered Vaccine

Advantages of Formaldehyde-Inactivated Vaccine (Salk)

1. Its effectiveness is established.
2. It can be combined with diphtheria-tetanus-pertussis antigens for routine use.
3. For those with partial series immunizations a single injection calls forth a prompt antibody response to all three types of virus.
4. There is some indication that when used extensively enough, some degree of control of epidemics can be effected.
5. Does not appear to prevent the development of natural immunity.

Disadvantages of Formaldehyde-Inactivated Vaccine (Salk)

1. It needs to be injected and therefore is not readily acceptable to some of the population.
2. It is more expensive per dose considering over-all cost of administration.
3. It requires multiple doses for producing high level immunity.

Advantages of Oral Vaccine (Sabin)

1. Ease of administration.
2. A single dose induces prompt antibody response for the particular type of virus.
3. It produces a substantial degree of resistance in the alimentary tract to reinfection with wild polio viruses.
4. Can be used successfully to stop epidemics.
5. It lends itself to rapid community-wide immunization programs and reaches segments of the population difficult to get to by the injection method.

Disadvantages of Oral Vaccine (Sabin)

1. Combined triple vaccine has not yet been licensed for distribution therefore vaccination by this method requires separate administrations for each type of virus at intervals of about six weeks.
2. It must be kept in frozen state and, after thawing, will remain potent for only about a week for shelf use.
3. During the summer period the increased presence of enteric viruses may

interfere with its ability to produce immunity and therefore should be given in the late fall, winter and spring months, except in the face of threatened epidemics.

4. A single type dose stimulates immunity against only one type of virus and it is very unusual that all vaccinees in any community will return for all three administrations of the vaccine.

Comments

We could begin our comments by stating that as a basic principle public health experience for many years has taught us that in order to be effective, any mass community-wide program of immunization must reach 80 per cent, or preferably more, of the population regardless of the type of vaccine we are talking about. Furthermore, efforts should be directed at the most susceptible population group which in this instance nation-wide studies as well as Louisiana experience indicates is the *pre-school* and *young adult groups.*

According to a recent release from the Surgeon General's office, since the introduction of the Salk inactivated vaccine about seven years ago, almost 100,000,000 persons have received this protection (about 50,000,000 have received four or more doses). These efforts, according to a recent release from the National Foundation, have resulted in an over-90 per cent reduction in the nation-wide incidence of paralytic polio. The basis for this statement was the 1961 total of 864 reported new cases of paralytic polio in the United States, which is a case rate of *5* per million population and which was compared to a yearly case rate of *162* per million persons for the pre-Salk period from 1949-1954. This group also estimated that approximately 7,000 polio deaths were prevented in this seven-year period.

You will recall that the Louisiana incidence rates were slightly higher but still of the same magnitude and significance. This very briefly is the case as we see it for the parenteral inactivated type vaccine, and I think it is a good one.

Now, with reference to the oral or Sabin type agent. In the past year, since the licensure of the vaccine, an estimated 19 million persons received Type I, 6 million Type II, and 13 million Type III, for a total of about 38 million doses. (PHS release dated August 22, 1962).

According to our files, the first official notice of any question relative to the use of oral vaccine was received by our State Health Officer through a communication from the State Health Officer of Mississippi, wherein he indicated that at a meeting early in May, 1962, the Executive Committee of the Conference of State and Territorial Epidemiologists and a subcommittee on Epidemic Intelligence of this conference, of which he is Chairman, considered the evidence then at hand on the apparent causal relationship between the use of Type III oral vaccine and the occurrence of cases within thirty days of its ingestion. A resolution came out of this meeting stating that there was a small but definite risk and the available data indicated a causal relationship between the vaccine and certain adult cases.

Subsequently, at least, according to the releases sent to the State Health Officer of Louisiana by the Public Health Service, the Advisory Committee on Oral Vaccine to the Surgeon General met on August 9, August 16, and September 15; the details and summary of these deliberations are contained in a technical report by the Surgeon General, dated September 20, 1962. (Dr. Smith has already given you the essential highlights of this report in her paper).

Summary

In conclusion, we would like to state that we are not personally in favor of the stand taken by two or three of the states as well as Canada on the complete suspension of the use of the oral type vaccine. Although we did send out copies of the Washington State Health Department analysis to the parish health units in Louisiana as informational material rather than a policy statement since it was in general a well thought out critique of the situation, it resulted in that state suspending the use of the oral vaccine.

All of us should remember that the Salk vaccine did survive a "Cutter incident" to the already documented benefit of the people. So we would like to make it clear that we are not advocating, nor have we recommended, to the State Health Officer or the State Board of Health a negative approach to this problem. This vaccine could well be—if all technical problems it now presents are solved—an added weapon to the hopeful goal of eradicating one of the most serious and tragic diseases known to medicine.

We would further suggest to this group that through its previously mentioned committee along with the State Medical Society, the State Board of Health and others who were a part of the original recommendation, to formulate another joint statement to the medical practitioners and public health administrators in Louisiana relative to the future use of oral vaccine along the following general principles:

1) That the original recommendation relative to the use of this vaccine in certain situations, such as its use in type specific epidemics be re-affirmed and modified in the light of the present evidence and questions on the use of Type III component.

2) That such a statement would provide guidance and a suggested planned cooperative program for every parish in Louisiana, with or without an organized medical society, to make the vaccine available to every citizen in Louisiana through the local physicians and the parish health units who, by tradition and practice, are thoroughly experienced in the field of mass immunizations and, even more important, in its eventual follow-up and continuation. This, of course, and we repeat, is all contingent only if and when the technical problems are solved and the vaccine is unconditionally licensed and approved.

3) The issuance of this second statement is of paramount importance in the light of some of the recent experiences in certain Louisiana parishes wherein in large metropolitan areas the well-organized medical societies planned and promoted these programs, involving in these plans many of the surrounding small parishes. In at least a few instances personally known to us through our medical friends in these adjacent parishes the local physicians were not only reluctant to be involved but professionally opposed to such promotions and pressures by certain drug house representatives in view of the recent evidence and publicity relative to this vaccine.

Incidentally, this does not mean that we are opposed to the idea of such combined campaigns since there are definite benefits to such an organized approach of both an educational and promotional nature for small parishes adjoining large metropolitan areas that do not have organized medical societies, large health unit staffs, or other essential community groups.

Finally, it should be pointed out that there is no immediate urgency for the inauguration of these mass programs. A conservative policy of waiting for the clarification of the questions relative to the Type III oral vaccine would not in any way preclude scheduling the starting of such projects until after January, 1963, since, with the present recommended dosage schedule, any mass community promotion beginning as late as February, or even March, of 1963 could be completed before the onset of the next polio season. This would then enable the local physicians in each parish to give the oral vaccine to their own office patients in 1963 which is recommended at the present time without prior application of the mass community program.

Glaucoma
Medical Versus Surgical Therapy*

• An exposition of an entity which is encountered by all in every day practice but which is particularly the concern of the ophthalmologist.

GEORGE M. HAIK, M. D.
GEORGE S. ELLIS, M. D.
New Orleans

GLAUCOMA may be defined as a disease in which the intraocular pressure is elevated to a degree that the eye cannot tolerate without damage to its structures. In the application of this definition, however, it must be remembered that the increased pressure may be intermittent or constant; that the disease develops insidiously but may be manifested abruptly; that the intraocular pressure varies from individual to individual, as well as at different times in the same individual; that susceptibility to pressure damage varies, but that, if the condition remains untreated, it may terminate in loss of function of the retina and optic nerve and ultimately complete loss of vision; and that all of these things may occur in eyes in which the pressure appears to be well within the so-called normal range.

A growing appreciation of the facts I have just outlined, combined with increasing accuracy of diagnosis, has resulted in a far more rational system of therapy for glaucoma, as the following summarized case histories, both of physicians, will indicate:

I was called by the first patient about 9:30 at night because he was seeing rainbows and the sight was blurred in his left eye, with and without his glasses. When I saw him at the hospital half an hour later, the symptoms had disappeared. Tonometry, however, showed increased intraocular tension in the left eye, and gonioscopy showed complete closure of the anterior chamber angle in both eyes. I recommended bilateral iridectomy, after explaining to the patient the mechanism of open- and closed-angle glaucoma and why the closed-angle type operation was necessary.

The second physician consulted me about four months ago because of some impairment of vision, for which he thought a change of glasses might be required. The routine office check-up, which always includes tonometry, showed increased intraocular tension in both eyes. Gonioscopic examination, however, showed that the anterior chamber angles in both eyes were open. Medical, not surgical, therapy was recommended in this case.

Classification

In each of these cases, the method of treatment was determined not by the degree of elevation of the intraocular tension but by the anatomic status of the anterior chamber angle as seen by the gonioprism. The advent of this instrument has put an end to the confusing classifications of glaucoma employed in the past and has permitted a classification based upon the mechanism of the disease and the degree of obstruction of the anterior chamber angle. Modern therapy of glaucoma depends upon this classification, which is as follows:

1. Chronic simple (open-angle, wide-angle), glaucoma which is further classified as:
 - A. Early
 - B. Late, which is further classified as:
 - a. Noncongestive.
 - b. Congestive.

* From the Department of Ophthalmology, Louisiana State University School of Medicine.

2. Angle-closure (narrow-angle) glaucoma, which is further classified as:
 A. Acute.
 B. Subacute or intermittent.
 C. Chronic, which develops when the tension remains constantly elevated following a previous attack of unrelieved acute or subacute angle-closure glaucoma.
3. Combined-mechanism glaucoma, which is further classified as:
 A. Simple glaucoma complicated by angle closure.
 B. Arrested temporary closure with permanent trabecular damage resulting in increased resistance to aqueous outflow but associated with few, if any, peripheral anterior synechiae.
4. Hypersecretion.

I might add that the terms used in this classification, that is, simple glaucoma and angle-closure glaucoma, were adopted by the Symposium on Glaucoma sponsored by the Council for International Organizations of Medical Sciences held in Canada in September 1954. It would simplify all of our discussions of glaucoma if they were used universally.

Mechanism

The basic mechanism in glaucoma—that is, the cause of the elevation in intraocular tension—is interference with the outflow mechanism of the aqueous humor through the drainage channels. For this obstruction there are several possible causes.

One of these causes, hypersecretion of the aqueous humor, needs no extended discussion. Some observers do not accept its existence. At most, it accounts for not more than 2 per cent of all glaucomas. In this variety the angle is open, the outflow is normal, and the cause for the elevation of the intraocular pressure, which may be constant or intermittent, is a true excess of aqueous over the normal amount.

Both chronic simple and angle-closure glaucoma have one factor in common, that the elevation of intraocular tension arises from an obstruction to the outflow of aqueous from the anterior chamber. There is, however, a fundamental difference between them in respect to the mechanism of the arrested outflow:

1. In chronic simple glaucoma, the aqueous has access at all times to the filtration apparatus, and the obstruction to its exit from the eye lies in some abnormality of the filtration apparatus itself. The trouble, in other words, is in the corneoscleral meshwork, in Schlemm's canal, or in the aqueous veins.

2. In angle-closure glaucoma the filtration apparatus itself is normal, and the obstruction to the outflow of aqueous is usually due to closure of the angle by contact between the iris root and the trabecular wall. As a result of this obstruction, the aqueous has no access to the filtration apparatus. At a later stage, after repeated episodes of angle closure, there may also be damage to the outflow mechanism, and the combined-mechanism type of glaucoma results.

In the subacute type of angle-closure glaucoma, the chamber angle is anatomically narrow, and actual closure occurs under the influence of various physiological factors, such as slight dilatation of the pupil; marked constriction of the pupil, which is not at all common; sudden dilatation of the uveal vessels; or other neurohumoral factors.

When closure occurs, the intraocular tension rises. In the first episodes, the closure is only partial, and, either spontaneously or as a result of miotic therapy, the angle re-opens and tension returns to normal. During the course of repeated episodes, especially if the process covers a considerable period of time, the iris in some areas becomes permanently attached to the trabecular wall and peripheral anterior synechiae develop. If the portion of the angle permanently closed by this process is small, tension may return to normal until the next episode. If a considerable portion of the angle remains permanently closed, tension, while it can be somewhat reduced by treatment with miotics, cannot be completely restored to normal. As a result, there is a rise in the base intraocular pressure and further ele-

vations in pressure occur from the new base line. If a large portion of the angle is permanently closed by synechiae, tension remains permanently and constantly elevated, in spite of all medical measures.

Eyes vary in their tendency to form peripheral anterior synechiae. In some instances, although angle closure is repeated and long-continued, adhesions do not form and the angle can be kept completely open with miotics. In other instances, peripheral anterior synechiae form readily, and they may be extensive and serious even early in the disease.

In advanced subacute closed-angle glaucoma, even if peripheral anterior synechiae do not form, tension cannot be reduced completely to normal by medication, and repeated episodes of angle closure eventually cause permanent damage to the outflow mechanism.

In the subacute variety of angle closure, the increase in intraocular pressure is less than in the acute variety, in which apposition of the iris and filtration network is generalized and closure is almost, or entirely, complete.

Heredity Factor—Heredity plays an unquestioned role in angle-closure glaucoma. It has two aspects. One is the frequency of high normal tensions in the patients' families. They were found in almost 25 per cent of the relatives who could be examined in the Kellerman-Posner[1] series. The other aspect is the high incidence of narrow angles in relatives of patients with narrow-angle glaucoma. It is now believed that the depth of the anterior chamber is genetically determined and that a shallower chamber occurs more frequently in glaucomatous families.

General Diagnostic Considerations

In the majority of glaucomas the diagnosis can be confirmed or ruled out by the combination of a careful history and examination supplemented by tonometric determinations. Tonography and provocative tests are also helpful. In the use of all instrumental methods, however, it must be remembered that the results may be influenced by errors of instrumentation, calibration and technique, and that the patient's cooperation or lack thereof is also important. With care these errors can be avoided, but, no matter how great the accuracy of the tests, conclusions must not be drawn from single determinations. Serial determinations provide useful information concerning the status of the eye, in conjunction with the history and clinical findings.

In spite of the use of all possible clinical and instrumental tests, a certain number of cases will remain in which the diagnosis is still unclear. In these circumstances, a more or less prolonged period of observation often proves the conclusive step in the investigation.

The exclusion of the diagnosis of glaucoma, which is often more difficult than the establishment of the diagnosis, is quite as important. If a patient is found to have glaucoma, it may mean a change in his whole way of life, and no one should be required to enter the lifelong observation and treatment necessary to keep glaucoma under control unless there is no doubt of the necessity for it.

In simple glaucoma, the diagnosis can usually be made without difficulty by a careful history and examination, supplemented by ophthalmoscopy, perimetry, tonometry and tonography. The initial examination should include a careful description of the disc and accurate peripheral and central field studies. This record is imperative, because the cardinal feature of the follow-up is the presence or absence of deterioration of the optic disc and of the field of vision. Field studies are repeated at one to six month intervals, depending upon the status of control.

The importance of accurate gonioscopy is evident in the fact that it determines the classification of glaucoma, and that the classification, in turn, determines the treatment. It not only helps to separate simple glaucoma from the angle-closure type, it also separates primary from secondary types. Since primary glaucomas are bilateral, the observation of a narrow angle in one eye and a wide angle in the

other indicates some secondary mechanism.

At the present time, the two methods of classifying angles by number are unsatisfactory and confusing, for a narrow angle in one classification is grade 1 and in the other is grade 4. To correct this difficulty, Shaffer[2] has suggested the following anatomic classification:

1. Wide open angle; closure improbable or impossible.
2. Narrow angle, moderate; closure possible.
3. Narrow angle, extreme; eventual closure probable.
4. Narrow angle, closed partially or completely; angle closure present.

Clinical Picture

The clinical picture of primary glaucoma depends upon:

1. The type of disease present, whether chronic simple (open-angle) glaucoma or angle-closure (narrow-angle) type.
2. The duration of the disease.
3. The stage (early, advanced, or late) at which the patient is seen.
4. The severity of the pathologic process.
5. Previous treatment and the response to it, or the lack of previous treatment.

Chronic Simple Glaucoma.—In the early stages of chronic simple glaucoma, the transition from a normal to a pathologic stage is practically imperceptible clinically. In fact, the only abnormality which can be demonstrated is a slight elevation of the intraocular tension or a reduced facility of outflow. Neither finding will be noticed unless the patient consults the ophthalmologist for some other cause, such as a change of glasses, and tonometry is done as part of the examination, as it always should be. External examination usually reveals no abnormality. The eye is normally pale and there is no external evidence of disease.

As time passes, and the intraocular pressure continues elevated, the untreated patient may complain of such symptoms as slight headache; indefinite pain in the eyes; blurring of vision, particularly on reading; diminution of visual acuity; and disturbances of peripheral vision. In the occasional case, unilateral blindness may occur.

Angle-Closure Glaucoma.—In the early stages of angle-closure glaucoma, there are episodes of raised intraocular pressure associated with definite symptoms, but they are usually brief and mild. They are followed by normal intervals in which the only defect in the eye is the capacity for closure of the angle, as evidenced by its narrowness and the shallowness of the anterior chamber. Both are anatomic abnormalities which have always been present and which may persist for years before their presence gives rise to difficulties.

In the early stages of angle-closure glaucoma, prodromal symptoms merge into clearcut symptoms, the difference being not in the clinical picture itself but in its intensity. These symptoms include:

1. Blurring of vision and loss of accommodation.
2. Rainbow-colored halos, with the blue-violet color nearest the light.
3. Slight pain in the head or eye.

Very slight circumcorneal injection may or may not be present. In very early cases, there is often no physical evidence of the disease beyond the pre-existent anatomic abnormalities already described.

The initial attacks may last from thirty minutes to two or three hours. They then subside, to recur at varying intervals. Between attacks, the tension returns to normal and, if the attack has been mild, there is usually no demonstrable damage to the eye.

The clinical picture of subacute or intermittent glaucoma has been well described by Chandler[3] and by Miller.[4] There are, as just mentioned, repeated attacks of partial angle closure, so that the episodes of elevated tension are neither as severe nor as intractable as in acute glaucoma. Eventually, after repeated attacks, portions of the angle may be permanently closed by peripheral anterior synechiae, or the trabecular network may be dam-

aged by repeated episodes of angle closure, or both conditions may develop. There is also a rise in the base intraocular pressure.

The attacks are commoner in winter than in summer, possibly because of the influence of light on the pupil. They are also commoner during the late afternoon and evening than in the morning. The frequency of the attacks varies from patient to patient. At first the intervals are long. Then they become shorter, and finally, in untreated disease, attacks occur almost daily possibly as the result of the combined effect of light and fatigue.

In both the early and the subacute stage of angle-closure glaucoma, predisposing and precipitating causes tend to be similar. In addition to such factors as mydriasis used for refraction and any sort of surgery, especially surgery on the other eye, attacks are often precipitated by emotional upsets, possibly because they influence pupillary dilatation or cause congestion of the uveal vessels. Attacks may also be precipitated by reading in a dim light, driving at night, or watching moving pictures and television, all of which require dark adaptation and result in dilatation of the pupil. Miller[4] would question the diagnosis if a patient with subacute glaucoma denied that moving pictures and television had any effect on his visual acuity. The halos experienced under these circumstances may disappear within twenty minutes if the patient leaves the darkened room for a lighted area but may continue, or even become more prominent, if he goes to another darkened area. Prolonged visual concentration may also precipitate an attack of angle-closure glaucoma, especially if it is carried out under poor lighting.

The patient, as first noted, may give a history of relief of mild attacks by leaving a dark area to return to normal daylight; or by looking at bright lights for several minutes; or by using hot or cold applications; or merely by going to sleep. Miller[4] found that some patients found their condition so much improved by rest and sleep that they modified their daily habits so as to sleep in the afternoon or early evening instead of at night. The effect of these measures, however, became less as the disease progressed. Miller also remarked that though daylight reduces intraocular tension and relieves symptoms, he had never found a patient who took advantage of this fact; the attack, instead, always aroused the desire for complete rest.

In the intermittent stage of angle-closure glaucoma, external examination shows the eye to be almost, or entirely, white and quiet. The anterior chamber is usually rather shallow over-all, but in some instances the shallowing may be only slightly marked axially and more pronounced peripherally. The state of the cornea depends upon the level of the intraocular tension; it may be clear or may show varying degrees of edema. As the slit lamp is moved out to the periphery of the cornea, the iris is seen to come closer and closer to the cornea until, at the extreme periphery, it touches it, or almost touches it. The pupil may react normally, but if the tension is not greatly elevated, the reaction may be more or less sluggish. If the tension is higher, the pupil may be slightly dilated.

In the early phases of angle-closure glaucoma, the nerve head is normal and the visual fields are full. If repeated attacks occur, or if the base pressure remains elevated, changes resulting from pressure may give rise to field changes similar to those found in simple glaucoma. Also the disc rapidly becomes atrophic.

Acute Congestive Angle-Closure Glaucoma.—Acute congestive angle-closure glaucoma may occur independent of any previous attack, but it frequently follows the prodomal symptoms already described. The pain is often severe enough to cause nausea, vomiting, chills, and bradycardia. If the involvement is bilateral, the visual involvement may not be realized until after the pain has been relieved. It is not unusual in such cases for an internist to be called because of the headache and vomiting.

External examination in acute congestive angle-closure glaucoma shows the con-

junctival vessels to be dilated and tortuous and all the ocular tissue extremely edematous. Other findings may include loss of corneal sensitivity and cloudiness of the cornea, which may be so involved in the process that fundal details are obscured. There may be cells in the anterior chamber, and occasional posterior synechiae may be present. The anterior chamber is usually shallow, but the axial depth is sometimes normal. The pupil is usually oval and dilated, and the iris is discolored. Later, if the congestive phase has persisted for some time, corneal blebs and vesicles form, and the number of synechiae increases. It is most important to determine the state of the angle in the other eye. If this examination is omitted, the condition may be confused with secondary glaucoma.

Post-Congestive Phase.—If a patient is seen for the first time after an acute congestive attack of glaucoma has terminated spontaneously or has been controlled by medication, a mistaken diagnosis of iritis may be made if the following possible findings are not borne in mind: subnormal intraocular tension; wrinkling of Descemet's membrane; slight, persistent pericorneal injection; occasional fine posterior synechiae; pigment on the posterior corneal surface and floating pigment particles in the anterior chamber; iris atrophy; and pupillary irregularity.

The so-called cataracta glaucomatosa acuta described by Vogt may also be present. These are multiple, circumscribed white spots, characteristically irregular in form, lying in radial arrangements beneath the anterior lens capsule. They decrease in intensity after the acute episode, and, if they are very small, they may disappear entirely. In time they are covered with clear lens fibers and are fused into the lens cortex. They cause no significant visual impairment.

In the chronic congestive form of glaucoma (Sugar's unrelieved acute glaucoma), the following findings are noted: The eye is blind. It continues to be injected, and the episcleral veins remain dilated. Vesicles appear on the cornea, the iris remains muddy, and the pupil is dilated. Pain persists until the injection gradually diminishes.

Rationale of Therapy

While I may seem to have spent an undue amount of time upon the classification and diagnosis of glaucoma, I hope that the reason for my emphasis upon these considerations is apparent: The recent improvement in the management of glaucoma has been brought about by a better understanding of the basic mechanism of the disease. This understanding has led to a simpler and more accurate classification. Since therapy is determined by whether the glaucoma is of the open-angle or closed-angle type, the diagnosis, by gonioscopy, is an essential step in the management.

Management of Closed-Angle Glaucoma

There is now general agreement that the correct treatment for angle-closure glaucoma is immediate surgery, whether or not the patient has had an acute attack. If he is seen early enough for prophylactic peripheral iridectomy to be performed, the chances of cure are about 95 per cent. If the condition is advanced when the patient is first seen and narrow-angle glaucoma has become closed-angle glaucoma, then iridectomy is of no value and a filtration operation is necessary.

After filtering procedures, the outflow capacity is usually improved and the intraocular pressure lowered. Routine tonography should be employed after operation, to detect promptly failure of the filtering bleb. A progressive decrease in outflow facility in an eye in which a filtering operation has been successful should raise the suspicion of scarring down of the bleb.

Medical management of angle-closure glaucoma may be necessary as an emergency measure in an acute attack, or as part of the preoperative preparation, but it should not be prolonged. Intermittent, unrecognized elevations in ocular tension usually occur while it is in progress, and, as a consequence, peripheral anterior synechiae form and interfere with trabecular function. If such a pathologic process ex-

ists, peripheral iridectomy has far less chance of success.

Long-term medical control is justified in angle-closure glaucoma only in patients who absolutely refuse surgery or in the occasional patient whose condition would make him a poor surgical risk.

Management of Open-Angle Glaucoma

The treatment of chronic simple (open-angle) glaucoma is primarily medical. Operation is indicated only after an adequate trial of medical treatment and progressive loss of vision justify the risks of a filtering procedure. When surgery is indicated, it should be carried out without delay. Prolonged inadequate medical therapy simply permits further damage to the eye, with further visual loss, and reduces correspondingly the chances for surgical success.

Continued medical therapy is justified under the following conditions:

1. The patient understands the necessity for return visits and for regular, continued medication and is entirely cooperative in both.
2. During therapy, there is no progression of field loss, and changes in the nerve head, if they are present, are not progressive.

The prognosis will be more favorable if the following conditions are met:

1. The patient is on therapy that is well tolerated.
2. Values can be maintained less than 20 mm. Hg. by applanation or Schiotz scale readings of 4.5 or above with a 5.5-gm. weight.
3. Outflow facilities can be maintained above 0.15 or preferably above 0.20.
4. The ratio of ocular tension to outflow facility (P_0/C) remains below 100. (Becker)[5]

Special Drugs.—The numerous drugs introduced in the last several years have greatly reduced the need for surgery in open-angle glaucoma. There are now available, in addition to the standard miotics, such as pilocarpine and prostigmin, such new drugs as phospholine iodide, humorsol, and DFP. They can be used at much less frequent intervals than the older preparations, but they must be administered carefully because of their higher potency and their potential systemic effects.

The introduction of the carbonic anhydrase inhibitors, such as acetazolamide, dichlorphenamide, and ethazolomide, was a great step forward. They can be taken orally, and they reduce intraocular tension by reducing the secretion of intraocular fluids.

The introduction of a large number of new therapeutic agents has introduced a certain amount of confusion in the management of open-angle glaucoma, in that it is not always clear what constitutes adequate medical therapy. Fortunately, we have become more conservative in our resort to surgery in glaucoma of the open-angle type, but I am afraid there has also been a tendency to try one therapeutic agent after another while the patient's condition deteriorates. Since many of the drugs age still in the testing stage, differences of opinion are inevitable, and each ophthalmologist must decide for himself, in all good conscience, what constitutes an adequate trial of therapy. (Scheie)[6]

In the treatment of chronic simple glaucoma, our policy is still to begin with pilocarpine, in 1 per cent solution, and increase the concentration of the drug until control is obtained. As a rule, if a 4 per cent solution fails to produce normotensive levels, higher concentrations are not likely to do so. The patient instills the miotic early in the morning, late at night, and twice during the day, at equal intervals. This routine is altered if the diurnal variation in pressure indicates the need for change.

The treatment of chronic simple glaucoma can be enhanced by combining miotic therapy with a drug or drugs that will decrease aqueous secretion. Carbonic anhydrase inhibitors decrease aqueous flow about 50 per cent. Some of these inhibitors accomplish suppression at lower dosage levels than others. Side effects, however, such as anorexia, fatigue, drowsiness, and the formation of urinary calculi

are not prevented by using smaller dosages.

Fortunately, patients who cannot tolerate one carbonic anhydrase inhibitor can sometimes tolerate another. For this reason, the ophthalmologist should familiarize himself with the use of all the clinically proved drugs in this group, such as Diamox, Daranide, Cardrase, and Neptazane.

In combined treatment with epinephrine and carbonic anhydrase inhibitors, intraocular pressure may be further reduced without any alteration in the outflow facility. Under these circumstances, the criteria for evaluation of prognosis must be changed and more reliance placed on pressure determinations than on the outflow facility.

At this time, it appears wisest to control most eyes at intraocular pressure levels less than 4.5 with a 5.5 gm. wt. This value may have to be altered in individual eyes because of variations in the vulnerability of the particular optic nerve to damage at a given level of pressure.

Criteria of Success.—The two most important criteria for evaluating the effectiveness of therapy in chronic simple glaucoma are careful and repeated tonometry and equally careful visual field studies done on a tangent screen at 1 meter. If a person of middle age has a pressure consistently greater than 3.0 with a 5.5-weight Schiøtz or shows progressive loss of field with increasing cupping in spite of adequate medical therapy, blindness can be forecast and surgical intervention should be recommended.[6] Certain eyes will sustain a pressure in the neighborhood of that just mentioned, and occasionally even higher readings, over a period of many years with no damage to the optic nerve, but the follow-up in such cases should be extremely close and the visual fields should be done at frequent intervals.

Tonography, when performed carefully and suitably corrected to the individual eye, provides valuable information about the progress of treatment and indications for further therapy. This laboratory test supplements and corroborates other findings, but it is not a substitute for good clinical judgment in the management of the patient. It does not indicate surgical intervention in the absence of progressive field loss.

The ophthalmologist who is treating open-angle glaucoma by medical measures must not become complacent simply on the basis of reduced intraocular pressure readings. Not infrequently, the pressure may be dangerously elevated during the morning hours or in the hour or two before the next instillation of the miotic, and yet be normal at other times. The pressure, therefore, must be recorded at various times during the day, and these observations must be supplemented by checks of the status of the optic nerve and the visual fields.

A recent study by Becker[5] showed that if intraocular pressure was initially at levels of 24 mm. Hg. or below on miotic therapy alone, there was, roughly, a 50 per cent chance of continued control over a 3-year period. If the pressure could be brought to levels below 20 mg. Hg., the chances of continued successful control for this period of time increased to about 75 per cent. Initial outflow facility values greater than 0.10 on miotic therapy alone assured continued control in two-thirds of the patients. Values greater than 0.15 increased the number of successes to over 80 per cent. In Becker's series a P_0/C ratio of less than 100 on miotic therapy was associated with successful control in over 90 per cent of the cases.

References

1. Kellerman, L. and Posner, A.: The value of heredity in the detection and study of glaucoma, Am. J. Ophth. 40:681-685, Nov. 1955.

2. Shaffer, R. N.: A new classification of the glaucomas, Tr. Am. Ophth. Soc. 58:219-225, 1960.

Shaffer, R. N.: Primary glaucomas. Gonioscopy, ophthalmoscopy and perimetry, Tr. Am. Acad. Ophth. 64: 112-127, Mar.-Apr. 1960.

Shaffer, R. N. and Schwartz, A.: Gonioscopy, Survey Ophth. 2:389-409, Oct. 1957.

3. Chandler, P. A., Glaucoma, 1958-1959, A.M.A. Arch. Ophth. 62:1101-1111, Dec. 1959.

Chandler, P. A.: Management of open angle glaucoma, Tr. Pacific Coast Oto-Ophth. Soc. 39:295-302, 1958.

Chandler, P. A.: Long-term results in glaucoma therapy, Am. J. Ophth. 49:221-246, Feb. 1960.

4. Miller, S. J. H.: The early diagnosis of glaucoma, Tr. Ophth. Soc. United Kingdom, 76:25-32, 1956.

5. Becker, B.: The prognostic value of tonography in

533799

miotic therapy of chronic simple glaucoma, Am. J. Ophth. 46:11-14, July 1958.

Becker, B. and Thompson, H. E.: Tonography and angle-closure glaucoma: diagnosis and therapy, Am. J. Ophth. 46:305-310, Sept. 1958.

Becker, B.: Glaucoma, 1957-1958, A.M.A. Arch. Ophth. 60:1112-1150, Dec. 1958.

Becker, B. and Gay, A. J.: Applanation tonometry in the diagnosis and treatment of glaucoma: an evaluation of decreased scleral rigidity, A.M.A. Arch. Ophth. 62: 211-215, Aug. 1959.

Becker, B.: Tonometry, tonography and provocative tests in the management of the glaucomas, Tr. Am. Acad. Ophth. 64:127-134, Mar.-Apr. 1960.

Becker, B. and others: Glaucoma family study, Am. J. Ophth. 50:557-567, Oct. 1960.

Becker, B.: Tonography in the diagnosis of simple (open angle) glaucoma, Tr. Am. Acad. Ophth. 65:156-162, Mar.-Apr. 1961.

Becker, B. and others: Topical epinephrine therapy of open-angle glaucoma, A.M.A. Arch. Ophth. 66:219-225, Aug. 1961.

Moses, R. A. and Becker, B.: Clinical tonography; the scleral rigidity correction, Am. J. Ophth. 45:196-208, Feb. 1958.

6. Scheie, H. G.: Filtering operations for glaucoma: A comparative study, Am. J. Ophth. 53:571-590, Apr. 1962.

The Physician's Right to New Drugs

What the government should do is determine the safety of a drug, be sure that all the facts about it—both good and bad—are known, and that the manufacturing controls are such that the product itself is of a uniform, predetermined quality. Then the medical profession should decide what to use and what not to use. It is axiomatic that different drugs affect different people in various ways. No amount of research, no matter how carefully done, or how extensive, can establish definitely all of the potential idiosyncrasies of various people towards any single drug. To set up a procedure whereby a Government analytical department must make an affirmative decision as to whether or not a physician has the **right** to see if some new medicine can be useful in some desperate case, seems to be going beyond the concept of a democratic government.—Joel Y. Lund, President, The Proprietary Association, at 81st Annual Meeting, White Sulphur Springs, W. Va., May 18, 1962.

Resuscitation in the Doctor's Office

• The various methods of life-saving in an emergency are enumerated and discussed.

EDWARD M. FOSTER, M. D.
Monroe

RESUSCITATION was practiced in Biblical times. Elisha restored the life of a child by blowing into his mouth (II Kings, 4:33-34). Parcelsus used the common fireside bellows for ventilation. Igelsbrud in 1901, and Lane in 1902, reported successful cardiac resuscitation in the operating room; and Beck, in 1947, carried out the first successful treatment of ventricular fibrillation by electrical countershock.

Artificial Respiration

Jude[1] states that "in treating cardiac arrest, the immediate artificial reinstitution of the oxygenation system is the first step." Cardiac massage without artificial respiration is useless. Immediate reoxygenation will often restore cardiac action in a heart which is beating so feebly that no heart sounds can be heard, while interruption of ventilation inevitably leads to cardiac arrest if not corrected.

In the doctor's office, there may be no mechanical equipment for artificial respiration; so, (1) pressure methods and (2) expired air methods may be used. The most effective pressure method in the supine position, which would allow simultaneous cardiac massage, is the method of Silvester. In this technique, according to Adriani,[2] the patient's wrists are grasped and his elbows pressed down over the lower chest wall, expressing air. The arms are then extended over his head, lifting the thorax. The elastic recoil of the lungs and thorax draws air into the lungs. Safar[3] states that the volume of air moved in and out of the respiratory tree during closed cardiac massage is not sufficient to support life. Each normal quiet respiration moves about 500 cc. of air. During closed massage, the air moved averages only 156 cc., and this volume of air would move back and forth in the dead space between the mouth and terminal bronchioles with nothing reaching the alveoli. One disadvantage of the supine position is the frequency with which the air passage becomes obstructed by the tongue. The head must be maximally extended and the jaw pulled forward. Two tongue blades lift the tongue up and forward; or the tongue may be grasped with the fingers and pulled out over the lower teeth, and a plastic airway slipped in behind it. There are certain hazards incidental to insertion of oral airways. Collins and Saland[4] state that the tongue may be forced into the posterior pharynx and cause complete obstruction. Teeth may be dislodged, and if the patient is not completely comatose, vomiting with aspiration or laryngospasm may be produced. The mouth must be carefully examined and any vomitus removed before ventilation begins, otherwise vomitus may be forced into the lungs.

Ventilation by expired air may be divided into (1) mouth to mouth and (2) mouth to nose techniques. In the former, the patient's head is maximally extended, and the air passage cleared. An oral airway is inserted, if available. The patient's nose is pinched and a gauze sponge placed over his mouth. The operator's breath is blown into the patient's mouth to inflate his lungs. Expiration occurs from the elastic recoil of the patient's lungs and thorax. Obstruction may be detected immediately by resistance to inflation. The operator can tell if he is inflating the lungs by watching the chest move, and adequate volume exchange is readily achieved. Disadvantages are: (1) the patient gets less oxygen (12-15

per cent compared to 20 per cent) and more CO_2 (3-5 per cent compared to 0.2 per cent) than in atmospheric air. If available, oxygen should be administered by nasal catheter while ventilation is in progress. (2) Use of too much pressure by the operator may rupture alveoli in infants. Care should be taken in ventilating children to use the cheeks to give short puffs of air. (3) Air may be forced into the stomach with subsequent regurgitation and danger of aspiration. (4) Respiratory and circulatory embarrassment may result from the distended stomach pushing up on the diaphragm. The Resusitube and the Safar Airway give a convenient mouthpiece to blow into.

In mouth to nose ventilation, the operator blows into the patient's nose. The mouth must be closed tightly. A soft rubber tube may be used as a nasopharyngeal airway. The head must be extended and the jaw pulled forward as before. Hazards of this method are: nosebleed and punching out of adenoid tissue which may be blown down into the lungs.

Some simple mechanical ventilators are available which can do a better job of ventilation than the aforementioned methods. The Kreiselman ventilator (which can be obtained from Ohio Chemical Company), is a simple accordian type bellows and mask arrangement. It has an exhalation valve which pops off and prevents excess pressure on the lungs. The mask is fitted over the face and the lungs inflated with room air by means of the bellows.

The Ambu ventilator (available from Air Shields, Inc.) has a bag lined with sponge rubber, which resumes its shape when released. This ventilator also has an attachment for oxygen and is operated by applying the mask to the patient's face, and alternately compressing and releasing the bag. The Ambu is probably less fatiguing to operate for a long period of time.

If available, a modern anesthesia machine has no equal for artificial respiration. Oxygen 100 per cent can be given and CO_2 absorbed. The lungs can be inflated for hours if necessary with a minimum of fatigue to the operator. If trained personnel are available, an endotracheal tube may be inserted, insuring absolute patency of the air passage, and guarding against aspiration of stomach contents in case of vomiting.

If there is absolute obstruction of the airway, tracheostomy may be necessary. If the operator is not thoroughly familiar with the procedure of tracheostomy, insertion of a large needle through the cricothyroid membrane would be more rapid and less traumatic. Oxygen, 10 liters per minute, can be delivered through a 17 gauge needle. This does not allow for elimination of CO_2, however.

In the larger centers mechanical ventilators are available which can deliver the needed volume of oxygen at any rate desired. These machines may be dangerous unless operated by trained personnel, and respiratory obstruction may go unnoticed.

Cardiac Resuscitation

Cardiac resuscitation has been practiced for years, although it probably was not recognized as such. It has been noted that thumping on the chest, especially in children, will sometimes restore the heart beat. During open cardiac surgery it was noted that adequate cardiac output with systolic blood pressures around 100 could be produced by cardiac massage. Kouwenhoven, Jude and Knickerbocker[5] at Johns Hopkins, proved that adequate cardiac massage could be accomplished through the closed chest. Their resuscitation technique is as follows: with patient in a supine position, on a rigid support, the heel of one hand with the other on top of it is placed over the lower one third of the sternum. Firm pressure is applied vertically downward about 60 times per minute. At the end of each pressure stroke, the hands are lifted slightly to permit full expansion of the chest. The operator should be so positioned that he can use his body weight in applying the pressure. Sufficient pressure should be used to move the sternum 3 or 4 cm. toward the vertebral column. Ventilation must go on si-

multaneously. Safar[3] states that a single skillful operator could perform both ventilation and heart massage fairly satisfactorily by first re-oxygenating the patient with a few deep inhalations and then starting closed chest cardiac massage and by interrupting massage every fifteen to thirty seconds to inflate the lungs a few times. Open cardiac massage may be slightly more effective, especially in a rigid thorax but in the doctor's office, open massage is impractical. In the hospital, it should be reserved for those cases in which closed massage does not produce an adequate femoral or carotid pulse.

Trauma may occur during closed cardiac massage. The most common type is fracture of the ribs, sternum or costal cartilages, but Jude[1] also reports tearing of the inferior vena cava, pneumothorax, laceration of the liver and hematoma beneath the liver capsule. He emphasizes that pressure should be applied over the sternum and not over the ribs.

Open cardiac massage requires opening the chest through the 4th left intercostal space, spreading the ribs apart and squeezing the ventricle between the thumb and fingers of the hand. Cardiac filling may be evaluated and the massage rate adjusted accordingly. This very effective method has some disadvantages: (1) accidental laceration of the heart when opening the chest, (2) rupture of the heart or great vessels, (3) it may require opening of the pericardium for effective massage, (4) it requires special instruments for opening and closing the chest, (5) it requires the services of a thoracic surgeon to close, (6) it is fatiguing to the operator during long massage and may require two teams, (7) it nearly always causes some trauma to the heart. Guevara, Greenburg and Hertzog[6] report that the hearts of three fourths of the children and one third of the adults studied at autopsy after open cardiac massage showed traumatic injury.

Adjunctive Drugs and Equipment

These are: (1) infusion of dextrose in water, (2) vasopressors, neosynephrine or levophed, (3) adrenalin for intracardiac use, 1 ampule of 1:1000 diluted in 10 cc. saline, (4) long needles to use for intracardiac injection, (5) Calcium Chloride to strengthen weak cardiac action, (6) sodium bicarbonate for acidosis, (7) quinidine or pronestyl to combat cardiac irritability, (8) external defibrillator, (9) E.K.G. machine (direct writing if possible), (10) ice mattress.

Recapitulation

1. If cardiac arrest occurs, oxygenation must be started immediately. Use mouth to mouth method.

2. Begin closed cardiac massage at rate of 60 per minute.

3. Place patient on hard surface in head down position to promote maximum venous return.

4. Start infusion and maintain blood pressure near normal limits with vasopressors: 10 mg. neosynephrine or 4 mg. levophed in 500 cc. dextrose.

5. Palpate femoral or carotid pulse.

6. Listen with stethoscope periodically to see if cardiac action is returning, attach E.K.G.

7. If heart is in ventricular fibrillation, use external defibrillator.

8. If cardiac action is not restored, inject 3-4 cc. of 1:10,000 adrenalin directly into heart and continue to massage. Shock again in five minutes.

9. Give 5-10 cc. of 10 per cent calcium chloride if heart beat is restored but is weak.

10. Give sodium bicarbonate 3.75 grams, intravenously, every ten minutes to combat acidosis.

11. Use cardiac drugs such as digitalis, quinidine or pronestyl as indicated after cardiac action is reestablished.

12. After arrest, temperature may go extremely high and appropriate measures, such as ice mattress, may be necessary to combat hyperthermia.

Conclusions

After cardiac arrest in the doctor's office, resuscitation using artificial respiration and closed cardiac massage is possible

and practical. Every case of sudden death is entitled to an attempt at resuscitation.

References

1. Jude, J. R., Kouwenhoven, W. B., Knickerbocker, G. G.: Annals of Surgery, 154:311-319, 1961.
2. Adriani, J.: Techniques and Procedures of Anesthesia, Second edition, Charles C Thomas, 1956.
3. Safar, P.: Anesthesia and Analgesia, Vol. 40, No. 6 (Nov.-Dec.) 1961.
4. Collins, V. J., Saland, G.: Kentucky State J. Medicine, 60:388 (Feb. 1) 1960.
5. Kouwenhoven, W. B., Jude, J. R. and Knickerbocker, G. G.: J.A.M.A., 173:1064 (July 9) 1960.
6. Guevara, U., Greenberg, H. and Hertzog, A.: Surgery, 51:211 (February) 1962.

Cost of Drugs and Value Received

I recently had a patient who had pneumonia. After five days of treatment he felt so much better that he wanted to return to work. He then began to complain of the high cost of the drugs he had to take. I said to him: "Next time you get ill, remind me not to prescribe these drugs, but to treat you in the manner we did 30 years ago—mustard plaster, brandy, and the like, and waiting for the 'crisis' to break about the ninth day, with a 50-50 chance of recovery. If you 'made it' it would be about two months before you would be ready to return to work—provided you have not collected pus which may require rib-resection for drainage." My patient remarked he had not thought of it that way and now realized the drug bill was very little to pay for value received.—Walter W. Hughes, M. D., in **New Medical Materia, March 1962.**

Solitary Pulmonary Nodules, Diagnosis and Treatment*

• The problem of the "solitary pulmonary nodule" as it confronts the present day clinician is briefly reviewed. A few of the diagnostic procedures available are described and a discussion of various pathologic entities which can exist are presented.

After careful review of all factors involved one can only conclude that all solitary non-calcified pulmonary nodules should be treated by thoracotomy.

ALBERT H. ST. RAYMOND, JR., M. D.
New Orleans

Introduction

ONE of the most difficult and challenging problems confronting present day clinicians is that of the solitary pulmonary lesion. A brief review of the literature has shown a gradual change of the clinical attitude toward this roentgenologic finding from one of quiet complacency, in which the patient was informed that he had a "spot on the lung" and advised to have periodic checkups, to one of deep concern. This present day attitude stems from the high incidence of malignancy of solitary pulmonary lesions reported in some series. (Storey,[1] Taylor.[2])

Although a discussion of all the facets of this problem would be very stimulating and interesting, time limitations make it necessary to concentrate on two major points.

I. Diagnosis—"What is it?"
II. Management—"What is the treatment?"

Definition and Nomenclature

In view of the multiple confusing definitions found in the present day literature concerning solitary pulmonary lesions, it seems appropriate at this time to emphasize the radiographic criteria necessary for a lesion to be included in this case study. The criteria mentioned below are those advocated by Davis et al.[3] They give one a clear and concise picture of the type of lesion involved in this discussion.

1. The nodule must be 6 cm. or less in diameter. Larger nodules may be included only if previous roentgenograms show the lesion to have been smaller than 6 cm. when originally detected.

2. Nodules must be solitary, although satellite lesions may be present.

3. The nodules must be completely within the substance of the lung, lateral roentgenograms showing it to be either anterior or posterior to the hilus.

4. The shape of the nodule must be round or ovoid, lobulations if present must be minimal.

5. No demonstrable calcium or cavitation must be present in the nodule.

6. The margins of the nodule must be circumscribed and its contour smooth.

7. Pneumonitis, atelectasis, or regional lymphadenopathy if present must be minimal.

There is no unanimity of opinion as to what to call these lesions. Among the terms suggested by various authors to name but a few are: solitary lung tumors,[4] single circumscribed intrathoracic densities,[5] asymptomatic isolated pulmonary nodules,[6] circumscribed solitary lung lesions,[7] nodular densities in the lung,[8] "coin" lesions,[9] etc. It is the opinion of the author that the term "solitary pulmonary nodules" proposed by Davis, Peabody and Katz[3] gives the best description of the type of lesion involved.

* Presented at the Eighty-second Annual Meeting of the Louisiana State Medical Society, May 8, 1963, Monroe.

Diagnostic Aids and Procedures

A. **History:**

It is indeed a rare case in which the patient's history will lead to a preoperative diagnosis. On the contrary it may actually be misleading. This is particularly true in cases of tuberculous patients in whom a solitary pulmonary nodule gradually develops. The natural tendency is to presume that the nodule is only another manifestation of the tuberculous process and treat it as such, only to find some time later that the patient has developed fatal metastatic lesions to the brain or other vital organs. The history of previous cancer surgery, although strongly suggesting the etiology of the pulmonary lesion, does not absolutely rule out the possibility of a second primary bronchogenic carcinoma instead of a metastatic lesion. This fact is especially true when the time interval between the previous surgery and the appearance of the pulmonary nodule is relatively long.

B. **Laboratory Examinations and Skin Tests:**

The diagnostic value of routine laboratory studies on the patient appears to be nil. Specific skin tests for acid fast bacillus organisms, histoplasmin, and coccidioidin organisms should be done on all patients with solitary pulmonary lesions as part of the overall diagnostic workup. In those cases demonstrating negative tuberculin, histoplasmin and coccidioidin skin tests the index of suspicion regarding a primary lesion should be extremely high and the patient urged to have early resection.

C. **Sputum Studies:**

Routine bacteriologic sputum examinations for tubercle bacilli and fungi are often negative in peripheral lesions and rarely aid in making a diagnosis. Even in those cases in which a positive sputum smear or culture is obtained the presence of a coexistent carcinoma cannot be absolutely ruled out. Davis et al.[3] reported 4 cases in which a lesion had been observed for periods ranging from one to three years because of a positive sputum. Two of the above mentioned cases had tuberculosis and carcinoma in combination but the other two patients demonstrated no tuberculous element in the resected specimens and were considered to be false positive reports.

D. **Bronchoscopy and Cytologic Examination of Sputum:**

In evaluating pulmonary disease the usefulness of bronchoscopy is widely known and accepted by the majority of thoracic surgeons. It may be done as a separate procedure or just prior to surgery. It is particularly useful as an extra precaution against overlooking a readily visible associated abnormality and allows the operator to obtain a satisfactory sputum specimen for cytologic examination.

The importance of cytologic examination has been emphasized by Hood et al.[10] from the Mayo Clinic. In their report, a positive diagnosis of bronchogenic carcinoma occurring as a solitary circumscribed lesion was made in 53 per cent of their cases from malignant cells demonstrated in the sputum preparations. Although negative cytologic results are not meaningful, a positive result may play a role in gaining the early cooperation of the patient if he doubts the need for surgery.

E. **Roentgenologic Findings:**

In view of the fact that these lesions are basically radiographic ones, good roentgenologic techniques and interpretations are of utmost value in attempting to arrive at a positive diagnosis. Routine posterior, anterior and lateral films usually supply information concerning size, shape, density, calcification, cavitation, irregularity and position of most lesions.

With regard to size it is a fact statistically that the small nodule, usually less than 1 centimeter, is more apt to be benign and the larger nodule more apt to be malignant. Benign lesions also tend to be more regular in shape with smooth, round, well defined margins as compared to malignant ones. It is the consensus of opinion, however, of most radiologists and thoracic

surgeons that it is impossible to differentiate between benign and malignant nodules on the basis of size or margination and that all solitary uncalcified pulmonary nodules should be excised.

Another roentgenologic finding which may be of value in suggesting a diagnosis is the so called "notch" sign of Rigler[11] seen on planigrams. He feels that the presence of indentation or umbilication of the border of a solitary nodule is strongly suggestive of the presence of malignancy.

A marked diversity of opinion exists regarding the nature of a solitary pulmonary nodule containing radiographic evidence of calcification. Many authors feel that lesions with demonstrable calcification are benign and need not be excised unless serial x-rays show signs of instability. Other writers object strenuously to its validity as a sign of benignity. These divergent views again emphasize the fact that each case must be individualized and all factors be considered before a decision whether to resect or observe a lesion is made.

Types of Lesions

Bronchial carcinoma in addition to being the most important single entity included among solitary pulmonary nodules is also one of the most common. An analysis of several combined series reveals an average of 29 per cent of all solitary pulmonary nodules to be bronchial carcinomas. A breakdown with regard to types reveals the majority of cases to be adenocarcinomas and squamous cell carcinomas with a much smaller number of undifferentiated carcinomas. One encouraging factor which stands out concerning survivorship is that peripherally located lesions which are adenocarcinomas or undifferentiated carcinomas have as favorable a prognosis as the squamous cell variety.

Although the majority of bronchial adenomas are centrally located and visible bronchoscopically, approximately 2 to 4 per cent present as solitary, circumscribed, peripheral nodules, it is universally agreed that they are potentially malignant lesions and are usually treated as such. Some authors believe that they should be classified as low grade adenocarcinomas. Be that as it may, the accepted treatment is usually the same as for a bronchial carcinoma.

Metastatic Malignancy

Among the neoplasms which are most likely to produce a solitary metastasis in the lung are those of the thyroid, colon, kidney and ovary. Although the benefits of resecting metastatic pulmonary nodules are dubious, the inability to tell clinically whether a circumscribed lesion is primary or malignant should encourage one to adopt an optimistically aggressive attitude with regard to resection. Barney and Churchill[12] reported a nine year survival of a solitary metastatic nodule resected from the lung—the primary lesion being a hypernephroma of the kidney.

Granuloma

By far the most frequently occurring benign lesions, composing over 40 per cent of all resected solitary pulmonary lesions, is the granuloma. Prior to the development of newer staining techniques, almost all of the granulomas were "lumped" together into one of two categories either tuberculomas or "non-specific" granulomas. With the perfection of newer stains such as the P.A.S., Gridley, etc.—as well as the older staining methods used in the past—more and more lesions have been definitely classified as histoplasmosis, tuberculosis or coccidioidomycosis. Other conditions which may cause granulomas are silicosis, brucellosis, and lipoid pneumonia.

Hamartoma

Despite the fact that many authors feel that hamartomas are rare pulmonary lesions, they are the next most common benign lesion occurring as a solitary pulmonary nodule. Although usually benign, several recent reports in the literature have been mentioned by Davis et al.[3] regarding primary malignancy found in hamartomatous lesions.

Unresolved pneumonias, abscesses and bronchogenic cysts may on rare occasions

assume the form of a solitary pulmonary nodule.

Management

In view of the inability to absolutely rule out a malignancy by any of the above mentioned methods, as well as the fact that the only chance of cure for most patients with bronchial carcinoma is early surgical removal, leads one to the conclusion that the procedure of choice for practically all noncalcified solitary pulmonary lesions is thoracotomy. An exploratory thoracotomy serves a two fold purpose—it allows one to make a positive diagnosis and at the same time to excise the lesion, which in most instances is the treatment of choice.

At the time of thoracotomy the operative procedure performed will usually depend on the histologic nature of the lesion. In the case of a benign lesion simple enucleation, segmental resection, "wedge" resection or lobectomy will usually suffice. It is the rare case in which pneumonectomy will be necessary.

Those cases which are malignant at the time of exploration will require lobectomy or pneumonectomy. It has been fairly well demonstrated that lobectomy is as efficacious as pneumonectomy for bronchial carcinoma in those cases in which no glandular involvement exists beyond the point of lobar drainage.

The prognosis of patients undergoing surgery for asymptomatic malignant solitary lesions is extremely good. Approximately 90 per cent of solitary pulmonary lesions due to pulmonary cancer are resectable. Five year survival rates for patients with asymptomatic malignant solitary lesions have run as high as 66 per cent in some series.

References

1. Storey, C. F.; Grant, R. A., and Rothmann, B. F.: Coin Lesions of the Lung, Surg. Gynec. & Obst. 97:95 (July) 1953.

2. Taylor, R. R.; Rivkin, L. M., and Salyer, J. M.: The Solitary Pulmonary Nodule. A Review of 236 Consecutive Cases, 1944 to 1956, Ann. Surg. 147:197 (Feb.) 1958.

3. Davis, E. W.; Peabody, J. W., Jr., and Katz, S.: The Solitary Pulmonary Nodule. A 10 Year Study Based on 215 Cases, J. Thor. Surg. 32:728 (Dec.) 1956.

4. Effler, D. B.; Blades, B., and Marks, E.: Problem of the Solitary Lung Tumors, Surgery 24:917, 1948.

5. Abeles, H., and Ehrlich, D.: Single, Circumscribed, Intrathoracic Densities, New England J. Med. 244:85, 1951.

6. Wilkins, E. W., Jr.: The Asymptomatic Isolated Pulmonary Nodule, New England J. Med. 252:515, 1955.

7. Bell, I., and Sealy, W. C.: A Study of Twenty-Three Cases of Circumscribed Solitary Lung Lesions. N. Carolina M. J. 13:289, 1952.

8. Williams, D. F.: Nodular Densities in the Lung, Med. Bull. U. S. Army, Europe 10:32, 1953.

9. O'Brien, E. J.; Tuttle, W. M., and Ferkaney, J. E.: Management of the Pulmonary "Coin" Lesion, S. Clin. North America 28:1313, 1948.

10. Hood, R. T., Jr.; Good, C. A., Clagett, O. T., and McDonald, J. R.: Solitary Circumscribed Lesions of the Lung, J.A.M.A. 152:1185, 1953.

11. Rigler, L. G.: A New Roentgen Sign of Malignancy in the Solitary Pulmonary Nodule, J.A.M.A. 157: 907, 1955.

12. Barney, J. D., and Churchill, E. D.: Adenocarcinoma of Kidney with Metastasis to Lung Cured by Nephrectomy and Lobectomy, J. Urol. 42:269, 1939.

A Fine Balance in Drug Legislation

It is of fundamental importance that new drugs, before being used widely in research and being marketed, should be adequately tested for safety. Of equal importance is the fact that there be a continuous flow of new and improved drugs. Any legislation on this subject, therefore, needs to strike a fine balance. On the one hand, it properly seeks to broaden and strengthen controls over drugs both new and old, to protect the public interest. On the other hand, it must encourage rather than obstruct the continuing flow in the number and kind of new drugs that are needed for better health.—Leonard A. Scheele, M. D., Senior Vice President, Warner-Lambert Pharmaceutical Company, to House Interstate and Foreign Commerce Committee, August 20, 1962.

The Journal of the Louisiana State Medical Society

Established 1844

Published by The Journal of the Louisiana State Medical Society, Inc. under the jurisdiction of the following named Journal Committee:

Ralph H. Riggs, M. D., Ex-Officio
C. M. Horton, M. D., Chairman
Sam Hobson, M. D., Secretary
Edwin H. Lawson, M. D.
J. E. Knighton, M. D.
M. D. Paine, Jr., M. D.

EDITORIAL STAFF

PHILIP H. JONES, M. D., Editor

COLLABORATORS—COUNCILORS

Nicholas J. Chetta, M. D.
J. E. Clayton, M. D.
Guy R. Jones, M. D.
C. E. Boyd, M. D.
Henson S. Coon, M. D.
John L. Beven, M. D.
J. Y. Garber, M. D.
R. E. C. Miller, M. D.

C. GRENES COLE, M. D., General Manager
1430 Tulane Avenue

Subscription Terms: $4.00 per year in advance, postage paid, for the United States; $5.00 per year for all foreign countries belonging to the Postal Union.

News material for publication should be received not later than the eighteenth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

Manuscripts should be addressed to the Editor, 1430 Tulane Ave., New Orleans, La.

The Journal does not hold itself responsible for statements made by any contributor.

Editorial

Polio Immunization

There is a continuing need for polio immunization. On the one hand there is the need of the individual who should follow his physician's advice and should receive proper immunization as a matter of self-protection and his own security. On the other hand there is the need on the part of those who provide community leadership to advise when community-wide immunization programs should be set up.

It is well known that there are now two vaccines which are available and as safe as any material for inoculation can ever be. Salk vaccine to be given by needle has been and continues to be a valuable resource for both individual and community protection. In the past seven years it has been estimated that of the age group 0 to 59, totalling 158,000,000, 38 per cent of the total group received no Salk vaccine at all. In spite of this the number of paralytic cases in a million dropped from 162 to 5 per year. This is estimated as a 97 per cent reduction in the annual toll of paralysis and is truly a monumental achievement. Even though this highly beneficial result has been obtained our medical and social organizations strive for more. Sporadic cases continue to occur and epidemics of less serious proportion than those of former years are appearing. In our state it is known that fewer doses of the Salk vaccine are being given at the same time that its success is being more statistically evident. Community immunization is obviously desirable.

The Sabin oral vaccine offers this possibility. It is advised by investigators in these fields. The Salk vaccine gives 70 to 90 per cent protection against paralytic polio and gives humoral immunity. It does not, however, bring about the type of protection that would keep the individual from being a carrier of polio virus repeatedly during his lifetime and thereby endangering others in his immediate environment. Theoretically he may spread the virus for some time just like an in-

dividual convalescent from the disease. The oral vaccine of the Sabin type can be given to a whole community and as a result the individual will have an immunity set up in the intestinal tract. The situation becomes such that the "wild" virulent strains cannot multiply because they cannot find new hosts. It is estimated that if 80 per cent of the population is so inoculated the natural spread of the virus will cover the remainder to such an extent that there will be no way for the virulent virus to propagate. With such points of view as these the Public Health Service in the past 18 months has approved the three types of Sabin vaccine for general use. Its administration was advised for late fall, winter and early spring. Many communities have arranged successful mass immunization programs.

Thirty-seven million doses of Type I live virus polio vaccine Sabin type have been given, 19,000,000 doses of Type II and 14,000,000 of Type III. Among those who received Type I and Type III rare incidences of illness developed. In each such occurrence, a committee of the Public Health Service attempted to decide for each case whether or not it is compatible with the possibility of having been induced by the vaccine. The committee did not consider that an individual case can be proved to be caused by the vaccine and no laboratory test has thus far provided a definite answer. Cases have been judged as "compatible" when three criteria were met: (1) Onset within a period (4-30 days after feeding) consistent with a reasonable incubation period, (2) an illness clinically consistent with paralytic polio, and (3) laboratory findings which do not exclude a vaccine relationship. With such criteria the total number of cases associated with administration of Type I vaccine and considered as "compatible" is 7 of which 4 were over 30 years of age. There were no cases associated with Type II vaccine and with Type III there were 11 of which 8 were over 30 years of age. It is of additional interest that the American Medical Association's committee reviewed the 11 case histories and decided that only 6 were vaccine associated. Four of these 6 had also received 4 or more Salk vaccine injections.

On September 15, 1962 the Canadian Ministry of Health recommended "temporary deferment" of oral vaccination pending an investigation of several cases among vaccinees. These had occurred at the rate of less than one in a million. The same day the U. S. Public Health Service's Special Oral Poliomyelitis Vaccine Advisory Committee recommended that Type III Sabin vaccine should be restricted to pre-school and school age children up to 18 and to those adults in high risk groups. This restriction was recommended pending further study. On December 20, 1962, the same committee recommended that the use of Type III be resumed for all persons up to age 30 and stated that "the maximum potential risk for Types I and III is of the order of one per million or less overall, but higher for those over 30 years of age." "Because the need for immunization diminishes with advance in age and because potential risks of vaccine are believed by some to exist in adults, especially by the age of 30, vaccination should be used for adults only with full recognition of its very small risk." Vaccination was especially recommended for those adults who are at higher risk of natural occurring disease, for example, parents of young children, pregnant women, persons in epidemic situations and those planning foreign travel.

Considering these statements and recommendations there is need for proper perspective and sense of proportion. When the field trials of the Salk vaccine were being regarded as controversial in 1954, the advice of the Committee for the Louisiana State Medical Society was that the trials should proceed. In 1955 when there were instances of polio following the vaccine, the decision was that immunization should continue. In August 1962 when the lay press locally was expressing the opinion that there was need for immunization programs to be started in Louisiana the opinion was given that Salk vaccine should be continued as previously and that mass

immunization programs for the oral vaccine should not be undertaken except in the cold months or in the face of an epidemic. It was felt that it was impossible for any mass immunization program to proceed without having illness develop and that such illness would unjustifiably be blamed on the vaccine. That such was the case is proven by the action of the Advisory Committee to the U. S. Public Health Service in recommending limitation of the use of Type III oral vaccine on September 15 and its subsequent recommendation of resumption of its use after reconsideration on December 20.

Many facts influence the making of these decisions. The Echo and Coxsackie viruses, unrelated to polio, are capable of producing a paralytic syndrome. The last of the three criteria which are required in a given case judged as compatible with having a vaccine connection is, that laboratory findings do not exclude a vaccine relationship. This might leave a given case open to a wide range of possibilities which can neither be included nor excluded. Additionally, it must be remembered that the vaccine longest in use, which is that for smallpox, is not unequivocally safe and its administration may be followed by untoward incidents. Even further, assuming that the risk of Type I or III is less than one in a million on the basis of the greatest good to the greatest number, the oral vaccine still should be used. It could be compared with the public's acceptance of the risk of automobile traffic which kills 38 to 40,000 a year and maims 1 to 2 million. Against this almost no protest is raised except those from the National Safety Committee and organized medicine who are like John the Baptist crying in the wilderness.

While our situation in Louisiana has been fortunate we should procede apace to provide all possible protection. Thirty-three polio cases were reported to the Louisiana State Board of Health in 1962. Of these 31 were paralytic. In 1961 there were 52 of which 44 were paralytic. Of the 33 cases in 1962, 19 had not been vaccinated. Eleven of the paralytic cases had received some vaccine but none had received the complete series of four injections recommended for full immunization. We have seen figures which show that the amount of immunization by the Salk vaccine has been showing a progressive decline since 1957. Such a situation could be the fertile ground for an epidemic somewhere in Louisiana. Experience of east Texas which had 28 per cent of the 886 cases occurring nationally is a warning to us that polio immunization is a continuing necessity. Four major communities in our state have shown creditable energy in arranging mass immunization programs. For the protection of all, other communities should undertake the same.

It is recognized that while two polio vaccines are now available the choice of which vaccine to use must rest with each community and each physician and will be governed by local conditions, facilities and leadership. The opportunity to further control this disease is one which should stimulate the best in civic and medical leadership.

ORGANIZATION SECTION

The Executive Committee dedicates this section to the members of the Louisiana State Medical Society, feeling that a proper discussion of salient issues will contribute to the understanding and fortification of our Society.

An informed profession should be a wise one.

ARRANGEMENTS COMMITTEES

1963 Annual Meeting

New Orleans, May 6-8

Maurice E. St. Martin, M. D., General Chairman

Merrill O. Hines, M. D., Vice-Chairman

ADVISORY

C. Grenes Cole, M. D., Boni J. DeLaureal, M. D., Emmett L. Irwin, M. D., A. V. Friedrichs, M. D., Val H. Fuchs, M. D., Max M. Green, M. D., W. Robyn Hardy, M. D., George H. Hauser, M. D., Sam Hobson, M. D., Edgar Hull, M. D., Philip H. Jones, M. D., H. W. Kostmayer, M. D., Edwin H. Lawson, M. D., H. Ashton Thomas, M. D.

BADGES

Patrick Henry Hanley, M. D., Chairman; Jason H. Collins, M. D., Vice-Chairman; Angelo J. Giorlando, M. D., John B. Gooch, M. D., Albert F. W. Habeeb, M. D., Philip J. Krupp, M. D., Robert C. Lancaster, M. D., E. Addis Munyan, M. D., Daniel C. Riordan, M. D.

BANQUET

Joseph W. Wells, M. D., Chairman; Willlam S. Neal, M. D., Vice-Chairman; Dan D. Baker, M. D., Carl J. Gulotta, M. D., B. Holly Grimm, M. D., A. N. Houston, M. D., John A. King, M. D., Thomas F. Kramer, M. D., Jack P. Ruli, M. D.

DECORATIONS

Joseph V. Hopkins, M. D., Chairman; Herman D. Webster, M. D., Vice-Chairman; Charles F. Goll IV, M. D., Howard Mahorner, M. D., Louis A. Monte, M. D., Alberto Prieto, M. D., Adrian F. Reed, M. D., Richard W. Vincent, M. D.

ENTERTAINMENT

Edward deS. Matthews, M. D., Chairman; Robert Kelleher, M. D., Vice-Chairman; Robert E. Gillaspie, M. D., Wm. H. Harris, Jr., M. D., Gene C. Hassinger, M. D., Lloyd J. Kuhn, M. D., George E. McCaskey, M. D., James T. McQuitty, M. D., Nicholas C. Montalbano, M. D.

FINANCE

Horace B. Dozier, M. D., Chairman; Eugene H. Countiss, M. D., Vice-Chairman; Robert Bernhard, Jr., M. D., Wallace H. Clark, M. D., Frederick A. Eigenbrod, M. D., Manuel Garcia, M. D., H. Reichard Kahle, M. D., Thomas C. Naugle, M. D., Robert C. Smith, M. D.

GOLF

Ruble E. Moor, M. D., Chairman; B. J. Casey, M. D., Vice-Chairman; Jack S. George, M. D., Abe Mickal, M. D., Percy A. Phillips, M. D., J. Kelly Stone, M. D., Earl Conway Smith, M. D., Gilbert C. Tomskey, M. D., R. M. Willoughby, M. D.

HOSPITALS

Charles R. Walters, M. D., Chairman; Richard Corales, Jr., M. D., Vice-Chairman; Wm. McDonald Boles, M. D., Cuthbert J. Brown, M. D., E. L. King, M. D., Martin O. Miller, M. D., Benjamin F. Parker, M. D., Theo L. Soniat, M. D., Neal Owens, M. D.

HOTELS AND MEETING ROOMS

Robert F. Sharp, M. D., Chairman; Dan Beacham, M. D., Vice-Chairman; John C. Dubret, M. D., George Haik, M. D., Alfred B. Longacre, M. D., Frank G. Nix, M. D., Wm. C. Rivenbark, M. D., Ambrose H. Storck, M. D.

LANTERNS AND MOTION PICTURE EQUIPMENT

V. Medd Henington, M. D., Chairman; William Perret, M. D., Vice-Chairman; Wm. P. Bradburn III, M. D., William B. Clark, M. D., Abe Golden, M. D., Henry C. Magee, Jr., M. D., Samuel B. Nadler, M. D., William H. Syll, M. D., John C. Weed, M. D.

LUNCHEONS

John G. Menville, M. D., Chairman; Robert A. Robinson, M. D., Vice-Chairman; W. D. Beacham, M. D., Adolph A. Flores, Jr., M. D., Thomas J. Garvey, Jr., M. D., Ambrose J. Hertzog, M. D., Samuel Karlin, M. D., Charles J. Moseley, M. D., James L. Treadway, M. D.

PUBLICITY

C. J. Brown, M. D., Chairman; Walter Becker, M. D., Vice-Chairman; Branch J. Aymond, M. D., Isidore Cohn, Jr., M. D., Jules Myron Davidson, M. D., Edwin R. Guidry, M. D., C. Gordon Johnson, M. D., C. Walter Mattingly, M. D., J. D. Rives, M. D.

REGISTRATION

Charles L. Cox, M. D., Chairman; John F. Oakley, M. D., Vice-Chairman; Gustav C. Bahn, M. D., John R. Blalock, M. D., John L. Dyer, M. D., Shelley R. Gaines, M. D., Frank Incaprera, M. D., Edward W. Nelson, M. D.

SCIENTIFIC EXHIBITS

Lyon K. Loomis, M. D., Chairman; Lawrence J. O'Neil, M. D., Vice-Chairman; Nick J. Accardo, M. D., Donovan C. Browne, M. D., Joseph A. Diaz, M. D., George D. Feldner, M. D., Morell W. Miller, M. D., Henry D. Ogden, M. D., James L. Treadway, M. D.

SIGNS

Robert C. Lynch, M. D., Chairman; Pascal L. Danna, M. D., Vice-Chairman; John J. Archinard, M. D., William L. Bain, M. D., Joseph M. Brocato, M. D., Robert J. Crawley, M. D., Everett L. Drewes, M. D., Sydney Jacobs, M. D., Philip M. Tiller, Jr., M. D.

TECHNICAL EXHIBITS

Richard Buck, M. D., Chairman; Edward L. Levert, M. D., Vice-Chairman; Richard L. Bagnetto, M. D., Frank L. Cato, M. D., Kenneth McLeod, Jr., M. D., Mary S. Sherman, M. D., Harold G. Tabb, M. D.

TRANSPORTATION

Norton W. Voorhies, M. D., Chairman; Adolph A. Flores, M. D., Vice-Chairman; Rufus H. Alldredge, M. D., Louis J. Bristow, M. D., Horace B. Chalstrom, M. D., Dabney M. Ewin, M. D., Robert M. Rose, M. D., C. S. Wood, M. D.

WOMAN'S AUXILIARY

J. Morgan Lyons, M. D., Chairman; Charles B. Odom, M. D., Vice-Chairman; Joseph N. Ane, M. D., Wm. P. Beatrous, M. D., John H. Dent, M. D., J. L. Fischman, M. D., Aynaud M. Hebert, M. D., Luis R. Oms, M. D., Dorothy York, M. D.

MEDICAL NEWS SECTION

CALENDAR

PARISH AND DISTRICT MEDICAL SOCIETY MEETINGS

Society	Date	Place
Ascension	Third Tuesday of every month	
Calcasieu	Fourth Tuesday every other month	Lake Charles
East Baton Rouge	Second Tuesday of every month	Baton Rouge
Jefferson	Third Thursday of every month	
Lafayette	Second Tuesday of every month	Lafayette
Morehouse	Third Tuesday of every month	Bastrop
Natchitoches	Second Tuesday of every month	
Orleans	Second Monday of every month	New Orleans
Ouachita	First Thursday of every month	Monroe
Rapides	First Monday of every month	Alexandria
Sabine	First Wednesday of every month	
Tangipahoa	Second and fourth Thursdays of every month	Independence
Second District	Third Thursday of every month	
Shreveport	First Tuesday of every month	Shreveport
Vernon	First Thursday of every month	

BRITISH MEDICAL EMIGRATION CITED IN JAMA

More than one-third of Britain's annual crop of medical graduates are emigrating to other countries, according to a study cited in the April 21 Journal of the American Medical Association.

A suspicion has been prevalent for several years in Britain that a disproportionately large number of young physicians are leaving their homeland regularly to pursue their careers in English-speaking countries throughout the world, a Journal editorial said.

Recently, the editorial said, Dr. John R. Seale, a British physician, author and lecturer, compiled data from the records of medical authorities in the countries in which Britons take up residence.

This survey revealed increased emigration to the United States, Australia, New Zealand and Southern Rhodesia while there was a decrease in emigration to South Africa, the JAMA editorial said. Comparative figures for Canada were not available, it said.

In the United States, statistics compiled by the AMA Council on Medical Education and Hospitals show that from 1932 to 1939 an average of 70 British medical graduates annually passed examinations to practice in this country while from 1956 to 1960 the number of Britons entering practice in the United States annually rose steadily from 104 to 192.

The 1932-1939 figure includes "a good many" Americans who studied in Britain while the 1956-1960 figures include relatively few American citizens, the editorial said.

"It is clear that the annual medical emigration from the British Isles is more than one-third of Britain's annual crop of medical graduates," it said.

If the figures compiled by Dr. Seale are accurate, the editorial continued, "it may be concluded that the younger generation of the British medical profession is already severely depleted."

OBJECTIVES AND PROGRAM OF THE AMA COMMITTEE ON NURSING*

The program of the AMA Committee on Nursing is based on 3 general assumptions: (1) that nurses have a separate and distinct professional status and their contributions are those of coworkers; (2) that nursing should expect the medical profession to support and endorse high standards of nursing education and service; and (3) that each of the various levels of academic and technical accomplishment in nursing makes its own unique contribution to the total health care of the public.

On the basis of these broad assumptions, the Committee has adopted the following objectives:

1. *To expand and strengthen liaison activities between organizations representing the medical and nursing professions at the national, state, and local levels.*

Liaison has been established with all major nursing organizations (including the American Nurses' Association, the National League for Nursing, the National Federation of Licensed Practical Nurses, the National Association for Practical Nurse Education and Service, and others) as well as with constituent and component medical associations, medical specialty groups, and several national organizations with a collateral interest in nursing.

The Committee feels that one of its major contributions is to promote interprofessional conferences between physicians and nurses. A committee composed of AMA and ANA representatives is now planning a conference on nurse-physician aspects of professional practice. The Committee on Nursing will also encourage the inclusion of nurses on programs of national and state medical meetings and attempt to remedy the scarcity of

* *Reprinted from The Journal of The American Medical Association, August 4, 1962, Vol. 181, Page 430, Copyright 1962, by the American Medical Association.*

positively oriented, unbiased material on nursing in the medical literature.

2. *To study and report to the medical profession on current practices and trends in nursing and on developments among nursing auxiliary personnel.*

Through its headquarters staff, the Committee is collecting information on nursing matters vital to physicians. A file of abstracts, excerpts, and reprints is available for quick reference.

3. *To stimulate, initiate, and, where feasible, support research in areas pertinent to the nurse-physician relationship in professional practice.*

Such research requires the collaboration of many disciplines. Several nurse-physician teams are now engaged in extensive research projects. These include studies of inter-disciplinary participation in planning care; the nursing needs of chronically ill ambulatory patients; and the amount and type of nursing service which makes the maximum contribution to maternal and infant welfare.

4. *To offer advisory services to both professions on inter-professional matters.*

The secretary and chairman of the Committee serve at present on the committee on careers of the National League for Nursing. The secretary is also a member of the advisory council of the National Federation of Licensed Practical Nurses, the National League for Nursing's committee to study costs of nursing education, and the hospital advisory council of the National Association for Practical Nurse Education and Service. The Committee will also serve as a consultant group to committees, councils, and departments within the AMA. Similar services have been offered to constituent and component medical associations.

5. *To provide support and assistance to the nursing profession and its nonprofessional auxiliary personnel in their efforts to maintain high standards.*

Nursing, like medicine, is faced with pressing demands for change if high standards are to be maintained in our present environment of rapid scientific and social advances. Nursing is now engaged in a continuous reevaluation of its educational system, its scope of services, its legal responsibilities, and other phases of its practice which reflect in the quality of patient care. This Committee supports the efforts of the nursing profession in maintaining high standards and offers its cooperation and assistance.

6. *To encourage physicians to accept invitations to serve on nursing school facilities.*

In view of growing pressures on the professional nurse to assume responsibilities of a medical nature, the teaching role of the physician warrants reevaluation. At the present time, some nursing schools are finding it necessary to assign nurse faculty members to lecture on medical subjects.

If the medical and nursing professions are to make the fullest use of their joint potential, they must have not only a common denominator of interest in the patient and a comparable body of knowledge, but also the kind of relationship that derives from a deeper appreciation of, and respect for, each other as allies working toward the same goals.

Clarence H. Benage, M. D., Elias S. Faison, M. D., Bensan W. Harer, M. D., Charles L. Leedham, M. D., William R. Willard, M. D., Arthur A. Kirschner, M. D., *Chairman.*

LOUISIANA PSYCHIATRIC ASSOCIATION ANNUAL MIDWINTER MEETING

The Louisiana Psychiatric Association held its Annual Midwinter Meeting at the Hotel Downtowner in Shreveport, Louisiana on January 19-20, 1963. Featured speaker was Dr. Walter Barton, Medical Director and past President of the American Psychiatric Association. Sixty psychiatrists attended from nine Louisiana cities. Officers of the Association are:

Gene L. Usdin, M. D., President, New Orleans, Louisiana
Harold I. Lief, M. D., President-Elect, New Orleans, Louisiana
Erle W. Harris, Jr., M. D., Vice-President, Shreveport, Louisiana
George W. Burke, M. D., Vice-President, Baton Rouge, Louisiana
William C. Super, M. D., Secretary, Metairie, Louisiana
Harold F. Bolding, M. D., Treasurer, New Orleans, Louisiana

SECTION OF OPHTHALMOLOGY AND OTOLARYNGOLOGY THE SOUTHERN MEDICAL ASSOCIATION

The Section of Ophthalmology and Otolaryngology of The Southern Medical Association announces that its next meeting will be held in New Orleans, La., November 18-21, 1963.

Papers will be accepted for consideration up to May 15, 1963. A title and brief abstract of 75 words or less should be sent, as soon as possible, to the Secretary, Dr. Albert C. Esposito, 1212 First Nat'l Bank Bldg., Huntington, W. Va.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

The next scheduled examination (Part II), oral and clinical, will be conducted for all candidates at the Edgewater Beach Hotel, Chicago, Illinois, by the entire Board, April 29 - May 4, 1963. Formal notice of the exact time of each candidate's examination will be sent him or her in advance of the examination dates.

Current Bulletins of the American Board of Obstetrics and Gynecology outlining the requirements for application, may be obtained by writ-

ing to the Secretary. All prospective candidates are urged to review the current requirements before applying for Board examination.

Diplomates are requested to keep the Board office informed of a change in address.

For further information contact Robert L. Faulkner, M. D., 2105 Adelbert Road, Cleveland 6, Ohio.

THE WEST VIRGINIA ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY

The West Virginia Academy of Ophthalmology and Otolaryngology will hold its sixteenth annual meeting at the Greenbrier Hotel, White Sulphur Springs, West Virginia on April 17-20, 1963.

An outstanding scientific program is planned which will include the following speakers:

For Ophthalmology

Byron C. Smith, M. D., New York City, New York

L. Harrell Pierce, M. D., Baltimore, Maryland

For Otolaryngology

Wm. F. House, M. D., Los Angeles, California

E. W. Johnson, Ph. D., Los Angeles, California

A registration fee of $35 for associate members will cover all social and scientific sessions.

For additional information, please contact the secretary, Worthy W. McKinney, M. D., Professional Park, Beckley, West Virginia.

AMERICAN COLLEGE OF CHEST PHYSICIANS ANNOUNCE 1963 MEETING

The following meetings are planned by the American College of Chest Physicians during 1963:

Seventh International Congress on Diseases of the Chest sponsored by the American College of Chest Physicians, New Delhi, India, February 20-24, 1963.

29th Annual Meeting, American College of Chest Physicians, Atlantic City, June 13-17, 1963.

Interim Session, American College of Chest Physicians, Portland, Oregon, November 30 - December 1, 1963.

SCOTT AND WHITE CONFERENCE IN MEDICINE AND SURGERY

Doctors and their wives are cordially invited to attend the Annual Spring Conference given by the Staff of the Scott and White Clinic at Temple, Texas, March 3, 4, 5, 1963. The program will begin Sunday afternoon, March 3, and will end promptly at noon Tuesday, enabling you to be away from your practice as short a time as possible.

There will be a fee of $25.00 for the Conference, $5.00 of which will be paid to the University of Texas Post-graduate School of Medicine, the remainder to cover the luncheon and dinners. The $5.00 fee to be paid the University of Texas Post-graduate School of Medicine will not be charged to members of the Veterans Administration, armed forces, residents and interns.

Thirteen hours of credit will be certified through the University of Texas Post-graduate School of Medicine to the Academy of General Practice for those members of the Academy of General Practice desiring credit for the course.

It is hoped that many wives will attend. They are cordially invited to the Hospitality Hour Sunday evening, a wives' luncheon on Monday, the dinner at the Temple Country Club on Monday evening. Other activities for the ladies are planned.

BOOK REVIEWS

Strong Medicine; by Blake F. Donaldson, Doubleday, 1962, 245 p. $3.95.

As individuals grow older they are more disposed to reminisce, their stories are taller and there is more imagination in the long past experiences they relate. This author is about 70.

The major systemic diseases to which the author applies his own personal viewpoint are Obesity, Heart Disease, Osteoarthritis, Diabetes, Hardening of the Arteries, High Blood Pressure, Gallstones and Allergy.

His management of the particular disease or condition is presented largely in the form of a letter of diagnosis and advice to a patient. The name is fictitious and one wonders sometimes if some parts of the history are not fictitious also. But this may be a good way for the author to present his ideas. It is used extensively in some other attempts to teach or indoctrinate people.

Obesity is extensively covered. Almost all people have it. This author has some way of setting the exact weight which the given patient should have and maintain. This, subtracted from the present obese weight, indicates exactly how much must be taken off, at the rate of three pounds a week. This is done on specified increasing exercise and the reducing diet consisting of about half a pound of fresh meat (beef or lamb) with suet added if necessary, and black coffee, but nothing else, three times a day. The patient must drink six glasses of water between meals, three in the morning and three in the afternoon.

Only after the weight is down to the specified normal may any other food be taken and then only in restricted amounts of only a few items. Such foods as flour must be eliminated for life. Eggs and milk are about as bad.

One remedy for the prevention of a great variety of diseases, such as migraine, common colds, pneumonia, duodenal ulcer, appendicitis, polio, athletes foot, etc., to which some relation to allergy is suggested, is a series of nine gradually increasing and intramuscular injections of boiled skim milk, starting with ¼ cc. and ending with 2 cc. There must not be more than seven days between injections.

Such courses of immunization are supposed to last for three years and then must be repeated. How far can an internist of good standing go with his imagination, in practice?

This book may be read with interest by the author's contemporary and near-contemporary internists. Younger ones will hardly be willing to spend the time.

Since there is an allergy slant to much of it, those who are "hipped" on this subject and therefore do not differentiate between co-existence of conditions and disease, and actual cause and effect relationships, will find it interesting and comforting reading.

CHARLES C. BASS, M. D.

Textbook of Pathology with Clinical Application; by Stanley L. Robbins, M. D., W. B. Saunders Company, 2nd ed., 1962, p. 1190 ($19.00).

The recently released 2nd edition of this popular student textbook of Pathology, while showing some change in format, is not greatly changed in text. The current edition, although slimmer than its predecessor, has a slightly larger page size. Both editions weigh seven pounds and therefore are a little cumbersome to handle.

The text is divided in the customary fashion into two sections, the first dealing with general and the second dealing with special pathology. The latter section makes up more than two-thirds of the volume. There are over three dozen new illustrations with an excellent use of "highlights" in many of the photographs of gross specimens.

The chapter outlines in the new edition are printed in bold type which will ease the student's problem of review. One of the outstanding features of the previous edition—a critical bibliography at the end of each chapter — has been brought up to date at least through most of 1961.

Among the new disease entities discussed in this edition are Haverhill fever, Listeriosis, Wegener's Granulomatosis, Carcinoid Syndrome and Endocardial disease, Sturge-Weber disease, Hemophilia variants, Waldenstrom's macroglobulinemia, Silo-Filler's disease, Zollinger-Ellison Syndrome, Dubin-Johnson disease and Gilbert's disease.

Chapter IV, "Inflammation and Repair," edited in the present edition by Sir Roy Cameron is little changed from the corresponding chapter in the first edition presumably written by Dr. Robbins.

This is an excellent student text and is also of value as a general reference book in pathology. This book deserves the acceptance it has received among medical students, pathologists and other graduate physicians. It can be recommended as one of the best available texts in the field.

EDWARD BOAGNI, M. D.

Occupational Diseases and Industrial Medicine; by Rutherford Johnstone and S. E. Miller, Saunders, 1960. 482 p. Price, $12.00.

This text appears to be a well written and up to date introduction to occupational diseases and industrial medicine. It is 482 pages long and presented in a well organized and readable format. References at the end of each chapter are quite current and the index and glossary are well done. The table of threshold values in the appendix is a particularly valuable addition to the text.

Illustrations are fair, particularly of industrial processes, but could be more numerous and one misses good colored plates of occupational diseases. Histological slide illustrations and x-rays in black and white are poor, but this is not unusual.

The text is predominantly devoted to the diseases themselves; Part II of the work, dealing with diseases, constitutes about three-fourths of the work.

Part I, treating of the administrative aspects, history and philosophy of industrial medicine is rather sketchy and the reader should look elsewhere for more detailed information on these aspects. There is little on instrumentation. Specialized occupational health problems, other than industrial, are only touched upon, namely those of the armed forces, other special groups, and of aviation medicine. It is also not a text on industrial hygiene.

In short, this is a good introductory text to the subject of industrial medicine.

PHILIP R. BECKJORD, M. D.

Textbook of Ophthalmology; by Francis Heed Adler, M. D., W. B. Saunders Company, Philadelphia, 7th edition, 1962, 560 pages, 288 illustrations, Price $9.00.

The seventh edition continues the original purpose of this book, namely to supply the general practitioner and student with information on diseases and injuries of the eyes. This edition of the book has undergone considerable revision and includes many new entities in which pathologic changes in the eye are part of the syndrome as well as an entirely new chapter on symptomatology of eye diseases. The material is presented in

an easily readable and understandable manner with good illustrations. Although it does not cover all of the diseases of the eye, it does an admirable job of covering the ones which are of interest to practitioners of medicine who are not specialists in Ophthalmology.

JAMES H. ALLEN, M. D.

The Human Testis: A Clinical Treatise; by Leonard Paul Wershub, M. D., F.A.C.S., Charles C Thomas, 1962, 249 p., $10.50.

The Human Testis is a book approximately 200 pages long, very long. The book contains a lot of repetitious statements but by and large the information is inadequate and superficial with a few exceptions. The book is full of misprints and misinformation. I cannot refrain from quoting a sentence which I think exemplifies the book in its whole: "The reader should also bear in mind that these children with an enlarged clitoris may be confused with a small penis" (p. 68).

Since I do not know to whom this book could be recommended, I would rather suggest that the interested physician obtain his information about the human testis from textbooks of pathology, histology or endocrinology.

J. U. SCHLEGEL, M. D.

Psychiatry—Biological and Social; by Ian Gregory, W. B. Saunders, Philadelphia, 1961, 577 p., $10.00.

Dr. Gregory's book is another addition to the ever-increasing number of psychiatric texts. The author makes a noble attempt to assemble most of the important current information within the covers of a moderate sized book. The result of this Herculean undertaking is a hodge-podge of facts, some valuable, but one that lacks the synthesizing hand — which only comes after prolonged exposure to data, prolonged thought, and then inner integration of the subject matter before it is put on paper.

All in all, the style is too hurried, the presentation too fragmented and the aim too great. The chief virtue of the book is that it does bring together in one volume work from the literature representing varied viewpoints.

A. W. EPSTEIN, M. D.

Pediatrics; by L. Emmett Holt, Jr., Rustin McIntosh, and Henry L. Barnett, 13th Edition, Appleton-Century-Crofts, 1962, 1395 p., $18.00.

The 13th edition of this old standard textbook of pediatrics represents its first revision for a period of nine years and was long overdue. However, the finished product incorporates the more recently acquired knowledge excellently and should rank as one of the best, if not, the best, of its kind.

The list of contributors is impressive and the contributions exhibit good standard quality. Careful editing is manifested in the continuity of writing style and manner of material presentation. A high light of this edition is the general excellence of the bibliographies. These follow each subject, are well selected and are up to date—a unique feature in general pediatric textbooks. Illustrations are well selected and are sharp in pictorial detail.

Apart from the inherent disadvantages of a comprehensive work of this kind, criticisms are minor. The print is small, more illustrations would be desirable, the price is high, etc.

For those desiring a comprehensive pediatric reference source or introduction to the field, this book would be a wise choice.

MAX D. COOPER, M. D.

Extracorporeal Hemodialysis Therapy in Blood Chemistry Disorders; by John E. Doyle, M. D. Charles C Thomas, 1962, 353 p. $11.50.

With the title, the author announces that the time has come to drop the headline, "Artificial Kidney" or some of the more florid misnomers, and begin to describe the dialysis of blood as a therapeutic procedure. He then presents a text based on 450 references. After a brief description of the basic concept of dialysis, there is an excellent summary of the development of hemodialysis starting with Abel, Rowntree and Turner in 1913. The reader is justly made aware of the reality that the widespread use of this procedure depended upon the preparation of a dependable anticoagulant and a dependable, inexpensive dialysis membrane. Neither the heparin nor the high quality sausage casing was made for this use. The pace quickened with the first successful hemodialysis by Kolff, who did much to make the "Artificial Kidney" popular among physicians and laymen alike. In rapid succession others described the use of the Artificial Kidney. The reviewer wonders if "vividifusion" or "extracorporeal hemodialysis" would have conveyed the thought to the physician or layman as well as the misnomer.

The subject matter is generally hazardous because there is an urgent need of meaningful common denominators in the area. Although the physical chemistry of dialysis or ultrafiltration has been described with thermodynamic accuracy, and models based on urea transfer can be reduced to calculus, the clinical procedure is an art handed down. No two experiences are exactly alike, and the comparison of a clinical case in one institution to another somewhere else is hardly more than qualitative. The description of a patient's blood chemistry falls very short of describing the illness because the substances quan-

titated for the most part are not pertinent. The author largely circumvents this difficulty by presenting a lot of experiences of many observers in terms of difficult to evaluate quantities such as nausea, oliguria, or the like. The difficulty in this area is again reflected in the decision to dialyze and in any attempt to tabulate the results.

The use of the Artificial Kidney is introduced as "indications", which are more completely described in later chapters. A chapter is devoted to contraindications which perhaps overemphasizes bleeding and underemphasizes arrythmias and unexplainable shock. The latter is often precipitous and not prevented by Maher's procedure of substituting albumin in saline for the priming volume.

The use of dialysis is described under the individual illnesses with completeness and with little editorializing. This observer would disagree with the thesis of not correcting hyponatremia in acute renal failure. Many a patient has circumvented the risks of dialysis by the use of hypertonic NaCl long before vomiting occurred. The indications to dialyze that are presented would lead to unnecessary dialysis of simple "shutdowns" with low rates of catabolism and would, as mentioned, be too late for the person severely damaged in a head-on auto collision. The author points out just how fast uremia can become complete.

The descriptions of dialysis in chronic renal failure are complete and anticipate Scribner's marathon step. There is extensive coverage of the removal of drugs and poisons from the body. These sections should be carefully read. Although this use is enthusiastically presented, the details are realistic. For example, the removal of barbiturates by dialysis is slow. Often a patient's blood level will actually rise during the procedure. Perhaps intestinal absorption becomes enhanced. At present, the removal of barbiturates by an "osmotic diuretic" is almost as fast. Recently, electrodialysis has been introduced to speed up barbiturate transfer.

Overhydration can be treated by ultrafiltering 8 to 10 pounds of water from the blood in six to eight hours dialysis. It is better prevented by physicians in attendance prior to dialysis. Although the book often refers to this as the means of relief of pulmonary edema in uremia, the fact that dialysis without ultrafiltration is often as effective appears on one page.

In the reviewer's opinion, too much space is devoted to apparatus. One is repeatedly reminded of Dr. MacNeil's apparatus with overemphasis of the advantages of ultrafiltration and a low extracorporeal volume. Most physicians in this field endorse Kolff's quoted comment that there is less difference between apparatuses than between the people using them.

In all this book is very useful. The title could read "Extracorporeal Hemodialysis Therapy of *Body* Chemistry Disorders". The reader should not be allowed to overlook the mysterious array of useful body chemicals removed along with the bad molecules, nor should he be left to latch onto K^+, H^+, or urea in lieu of the fact that the dialyzable cause of death in uremia remains unidentified.

EDWARD S. HYMAN, M. D.

Treatment of Injuries to Athletes; by Don H. O'Donoghue, M. D., W. B. Saunders Company, 1962, 649 p. $18.50.

Dr. O'Donoghue has presented a fine text limited to prevention, recognition, and treatment of athletic injuries. The material is basic and he makes no claim for originality of concept or of procedures.

Dr. O'Donoghue has for the first time, I believe, put this material all in one easy to read volume. It is true that the volume will be of greatest interest to the physician in Athletic Medicine and to the orthopedic surgeon, yet the widespread involvement makes it important to all practitioners of medicine.

Treatment of Injuries to Athletes is highly recommended to all physicians who see or care for the athlete, whether high school, collegiate, or professional, as a basic trauma text.

PAUL C. TRICKETT, M. D.

W. B. SAUNDERS COMPANY features the following recent books in their full page advertisement appearing elsewhere in this issue:

1963 CURRENT THERAPY
Today's best treatments — ranging from management of conditions causing enuresis to treatment of coma with analeptic drugs.

BOCKUS—GASTROENTEROLOGY
An eminent 3-volume work! Volume I, on the Esophagus and Stomach, just published.

MEARES—MANAGEMENT OF THE ANXIOUS PATIENT
Tells you from what sources anxiety in a patient may spring and how it can be resolved.

PUBLICATIONS RECEIVED

(Certain ones of these will be selected for review)

Philosophical Library, Inc., N. Y.: Specific and Non-Specific Factors in Psychopharmacology, edited by Max Rinkel, M. D.; Dictionary of Erotic Literature, by Harry E. Wedeck.

The Williams & Wilkins Co., Balt.: Ophthalmology in the Tropics, by E. J. Somerset, M. B., M. S.





BULK IS BASIC in geriatric constipation

METAMUCIL®

adds tone to the atonic colon

Metamucil, refined hydrophilic mucilloid, is especially suited to correct the kind of constipation most frequently encountered in elderly patients.

Metamucil adds soft bulk to the often inadequate diets of older persons and supplies the gentle intracolonic pressure needed to induce normal peristaltic action.

This true physiologic stimulus increases muscle tone, encourages normal reflex activity and helps reestablish the natural rhythmic function of the bowel. Only a soft bulk stimulus like Metamucil offers such natural encouragement to normal evacuation.

Metamucil is available as Metamucil powder in 4, 8 and 16 oz. containers and as lemon-flavored Instant Mix Metamucil in cartons containing 16 and 30 single-dose packets.

METAMUCIL®

brand of psyllium hydrophilic mucilloid

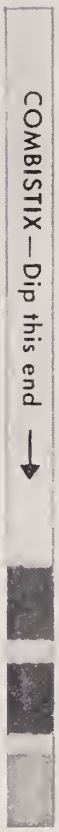
G. D. SEARLE & CO.

CHICAGO 80, ILLINOIS

Research in the Service of Medicine

one answer... three minutes





three answers ...ten seconds

DIP AND READ

combistix®

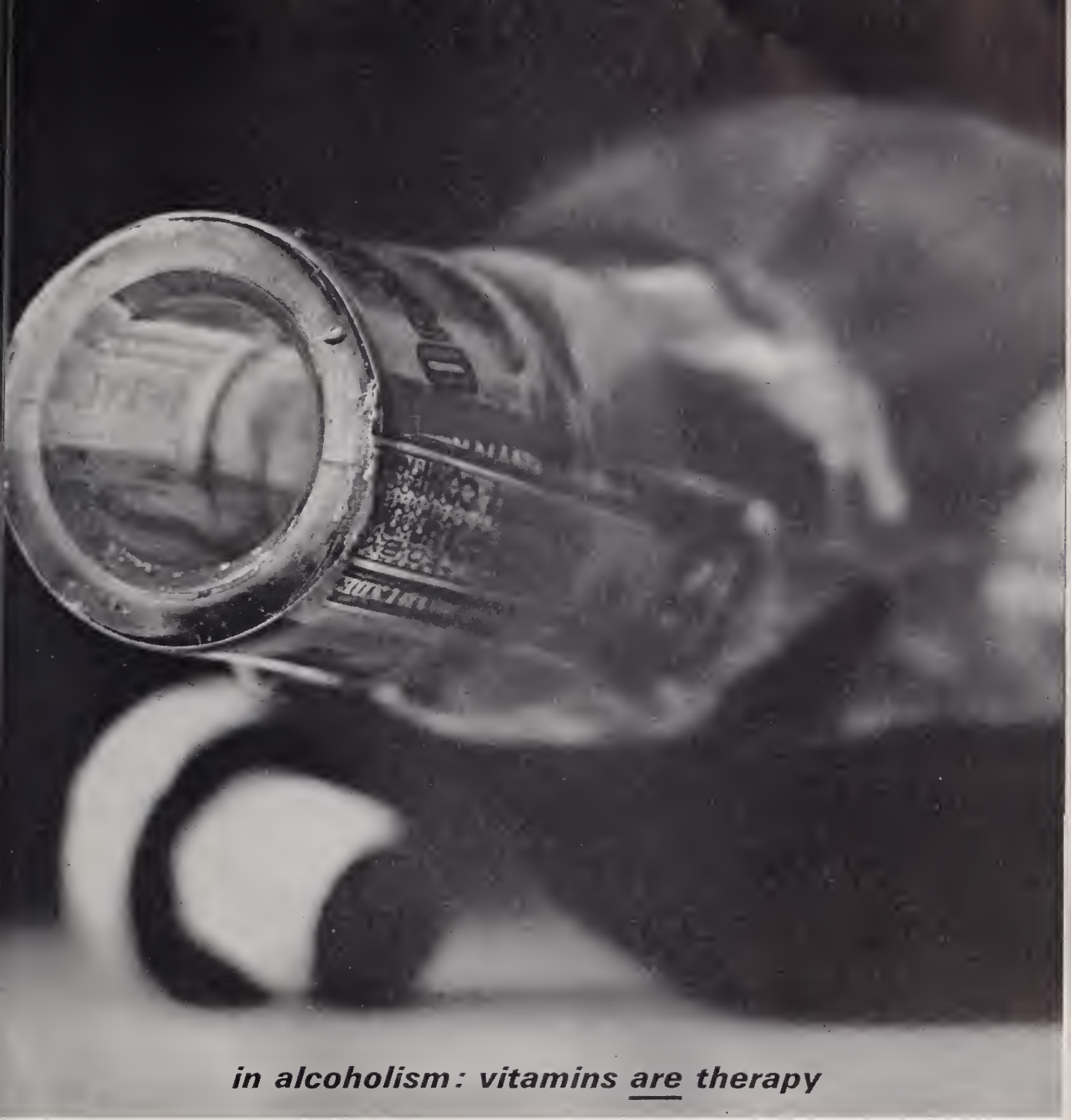
urine protein • glucose • pH

BASIC COMBINATION TEST FOR BEDSIDE AND OFFICE

... faster than taking temperature. Detects glucosuria (as in diabetes), proteinuria (as in renal disorder), abnormal pH (as in calcinosis or GU infection). For routine screening of all patients. COMBISTIX—*basic as the stethoscope.*

AMES products are available through your regular supplier. 38263

AMES
COMPANY INC
Elkhart • Indiana
Toronto • Canada



in alcoholism: vitamins are therapy

A full "comeback" for the alcoholic is partly dependent on nutritional balance...aided by therapeutic allowances of B and C vitamins. Typically, the alcoholic patient is seriously undernourished...from long-standing dietary inadequacy, from depletion of basic reserves of water-soluble vitamins. Supplied in decorative "reminder" jars of 30 and 100.

Each capsule contains:	
Vitamin B_1 (Thiamine Mononitrate)	10 mg.
Vitamin B_2 (Riboflavin)	10 mg.
Niacinamide	100 mg.
Vitamin C (Ascorbic Acid)	300 mg.
Vitamin B_6 (Pyridoxine HCl)	2 mg.
Vitamin B_{12} Crystalline	4 mcgm.
Calcium Pantothenate	20 mg.

Recommended intake: Adults, 1 capsule daily, or as directed by physician, for the treatment of vitamin deficiencies.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.

STRESSCAPS®

Stress Formula Vitamins Lederle

Pardon Me!



FOR EFFECTIVE CONTROL . . . OF MOST UNNECESSARY COUGHS

A POTENT antitussive and expectorant (without sugar)

TOLU-SED®

(For prompt relief of a wide variety of coughs, including those associated with colds, bronchitis, throat irritations, influenza, asthma, smoking, smog, dust irritation, and excessive use of the voice.)

EACH FLUID OUNCE CONTAINS:

64.8 mg.	**CODEINE PHOSPHATE***—For its well-known actions in suppressing unnecessary and nonproductive coughs, AND to decrease the viscosity of sputum.
6 mg.	**CHLORPHENIRAMINE MALEATE**—To correct those allergic components which may be due to histamines. (The antihistaminic may contribute the usefulness of this preparation if locally released histamine plays a role in the process which causes the bronchial irritation.)
600 mg.	**GLYCERYL GUAIACOLATE**—To increase the fluidity of respiratory tract secretions. This action decreases the irritating effect of inspissated mucus and facilitates its removal.
2.5 gr.	**TOLU**—Because Tolu has been found useful on an empirical basis for coughs of diverse etiology.
2 min.	**CHLOROFORM**

***Contraindications:**

Codeine phosphate may be habit forming. In very large doses it may depress respiration.

Availability: Pints and Gallons

Administration and Dosage:
For Adults: 1 teaspoonful which may be repeated every 3 or 4 hours.

For Children over 6 years of age: ½ teaspoonful every 4 hours if necessary.

First Texas *Pharmaceuticals, Inc.*

DALLAS • ATLANTA • SINCE 1901



Relieves Anxiety and Anxious Depression

The outstanding effectiveness and record of safety with which Miltown relieves anxiety and anxious depression—the type of depression in which either tension or nervousness or insomnia is a prominent symptom – has been clinically authenticated time and again during the past seven years. This, undoubtedly, is one reason why physicians still prescribe meprobamate more often than any other tranquilizer in the world.

Miltown®

meprobamate (Wallace)

Usual dosage: One or two 400 mg. tablets t.i.d.
Supplied: 400 mg. scored tablets, 200 mg. sugar-coated tablets; bottles of 50. Also as MEPROTABS® – 400 mg. *unmarked*, coated tablets; and in *sustained-release* capsules as MEPROSPAN®-400 and MEPROSPAN®-200 (containing respectively 400 mg. and 200 mg. meprobamate).

WALLACE LABORATORIES / *Cranbury, N. J.*

Clinically proven in over 750 published studies

1. Acts dependably – without causing ataxia or altering sexual function
2. Does not produce Parkinson-like symptoms or liver damage
3. Does not muddle the mind or impair physical activity

CM-7972



BENEFICIAL RESULTS were obtained with **SARDO** in the bath in 122 of 135 patients (90%) with dry, itchy skin conditions, in most cases with beneficial effect "after the first bath." Dryness was allayed in all cases, and associated itching "either completely relieved or greatly improved." No irritation or sensitization was observed.

This new study corroborated others[2-4] showing that SARDO helps re-establish the normal physiologic lipid-aqueous skin balance.

Pleasant, easy-to-use SARDO releases millions of microfine water-dispersible globules* in the bath. Bottles of 4, 8 and 16 oz.

* Patent Pending T.M. © 1963 by Sardeau, Inc.

SAMPLES and literature available from . . .

SARDEAU, INC.

75 East 55th Street, New York 22, N. Y.

1. Borota, A., and Grinell, R. N.: J. Amer. Geriatrics Soc., 10:413, 1962.
2. Spoor, H. J.: N.Y. State J. M. 58:3292, 1958.
3. Lubowe, I. I.: Western Med. 1:45, 1960.
4. Weissberg, G.: Clin. Med. 7:1161, 1960.

For your elderly arthritic patients



AN EFFECTIVE GERIATRIC ANTIARTHRITIC WITH DISTINCTIVE SAFETY FACTORS

safely indicated – even when **OSTEOPOROSIS** is present

PABALATE-SF, which has been found "superior to aspirin in the treatment of chronic rheumatic disorders,"[1] possesses distinctive **Safety Factors** for elderly arthritics, even when osteoporosis is present: (1) its potassium salts cannot contribute to sodium retention; (2) its enteric coating assures gastric tolerance; and (3) it does not produce the serious reactions often noted during therapy with steroids or pyrazolone derivatives.

In each persian-rose enteric-coated tablet: potassium salicylate, 0.3 Gm.; potassium para-aminobenzoate, 0.3 Gm.; ascorbic acid, 50 mg.

1. Ford, R. A., and Blanchard, K. P.: J.-Lancet 78:185, 1958.

Precaution: Occasionally, mild salicylism may occur, but this responds readily to dosage adjustment. In the presence of severe renal impairment, care should be taken to avoid accumulation of salicylate and PABA. Supply: Bottles of 100 and 500 enteric-coated tablets.

Pabalate®-SF

Robins

(the new, convenient way to prescribe Pabalate-Sodium Free)

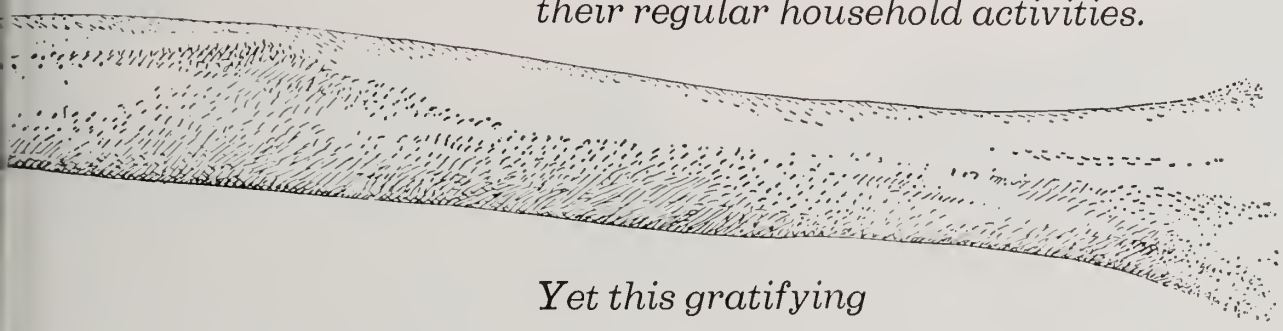
A. H. ROBINS COMPANY, INC., RICHMOND, VIRGINIA

gratifying relief fo



ainful joints

With ARISTOCORT, *patients with painful, arthritic joints obtain rapid reduction of pain and inflammation, as well as substantial improvement in joint mobility. Many patients who might otherwise be confined in a state of invalidism have been able —with* ARISTOCORT—*to continue their customary livelihoods or go about their regular household activities.*



Yet this gratifying symptomatic relief may not be accompanied by severe hormonal collateral effects, such as sodium retention, edema, emotional disturbance, insomnia or voracious appetite—that may prevent patients from obtaining corticosteroid benefits.

unsurpassed for total patient benefits

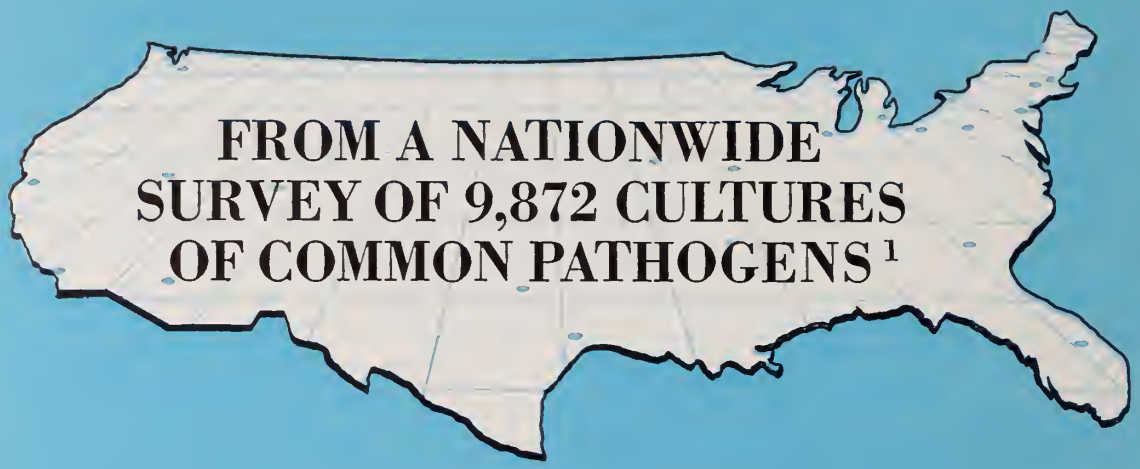
Aristocort®

Triamcinolone Lederle

SUPPLIED: Scored tablets (three strengths), syrup, parenteral and various topical forms. Request complete information on indications, dosage, precautions and contraindications from your Lederle representative, or write to Medical Advisory Department.

Lederle

LEDERLE LABORATORIES
A Division of American Cyanamid Company
Pearl River, New York



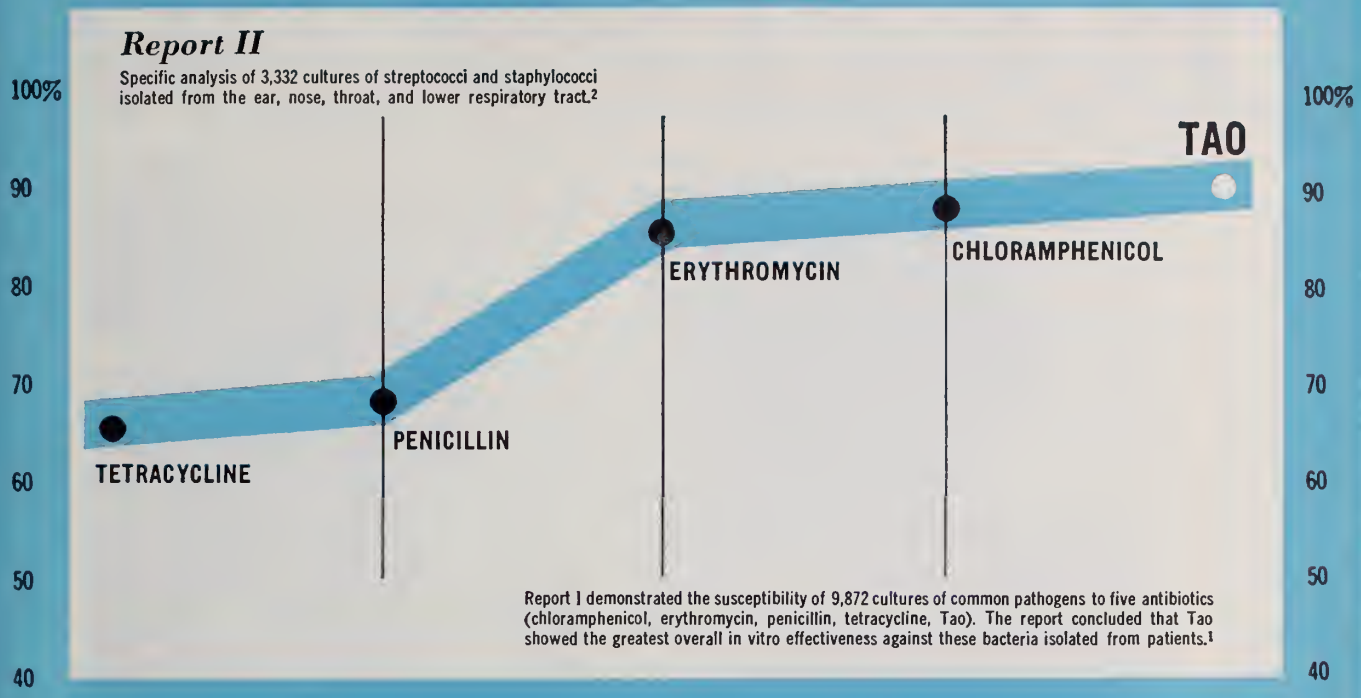
FROM A NATIONWIDE SURVEY OF 9,872 CULTURES OF COMMON PATHOGENS [1]

Conclusions of Nationwide Survey: *Report I*

1. **Even after five years of general use,** Tao, of the antibiotics tested, demonstrated greatest activity against respiratory streptococci and staphylococci (3,332 cultures).

2. **Overall results showed a higher percentage of susceptibility** among these common pathogens to Tao than to the other antibiotics. Susceptibility to Tao was greatest, not only in respiratory streptococci and staphylococci, but also in these organisms isolated from skin and soft tissue (3,423 cultures), genitourinary and gastrointestinal tracts and other sources (2,458 cultures). Susceptibility was equal to all antibiotics tested in pneumococci from unspecified sources (463 cultures), and less to Tao in H. influenzae from unspecified sources (196 cultures).

3. **Tao has been used for five years without development of predictable cross resistance.** In 1958 and 1961, approximately 73% and 70%, respectively, of erythromycin-resistant problem staphylococci showed susceptibility to Tao.[3,4] The present study confirms the continuing high degree of Tao activity even against these pathogens. Of 1,592 cultures of erythromycin-resistant staphylococci, 68% were susceptible to Tao, while in the reverse situation, only 33% of 768 Tao-resistant staphylococci were susceptible to erythromycin.



Report II

Results of Bacterial Susceptibility in 3,332 Respiratory Pathogens

References

1. "Bacterial Susceptibility Patterns: A Geographic Survey." Fowler, J. Ralph, M.D., and Watters, John L., M.D. Scientific Exhibit presented at the Annual Meeting of the American Society of Clinical Pathologists, Chicago, Ill., August 31 to September 9, 1962. 2. Fowler, J. Ralph, Watters, John L. and Levy, Arthur M.: Bacterial Susceptibility Patterns as Related to Geographic Variation and Anatomical Source. In press. 3. English, A. R., and Fink, F. C.: Antibiot. & Chemother. 8:420 (Aug.) 1958. 4. English, A. R., and Fink, F. C.: Antibiot. and Chemother. 11:648 (Oct.) 1961.

ROERIG

New York 17, N. Y.
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being®

If you would like a report of the entire susceptibility study, write Medical Department, J. B. Roerig and Company, 235 E. 42nd St., New York 17, N.Y.



Capsules · Ready-Mixed Oral Suspension · Pediatric Drops · Parenteral (as oleandomycin phosphate)

asthma attack averted
. . . in minutes

patient protected
. . . for hours





Nephenalin®

(the dual-action anti-asthmatic tablet)

. . . works with nebulizer speed—provides four-hour protection

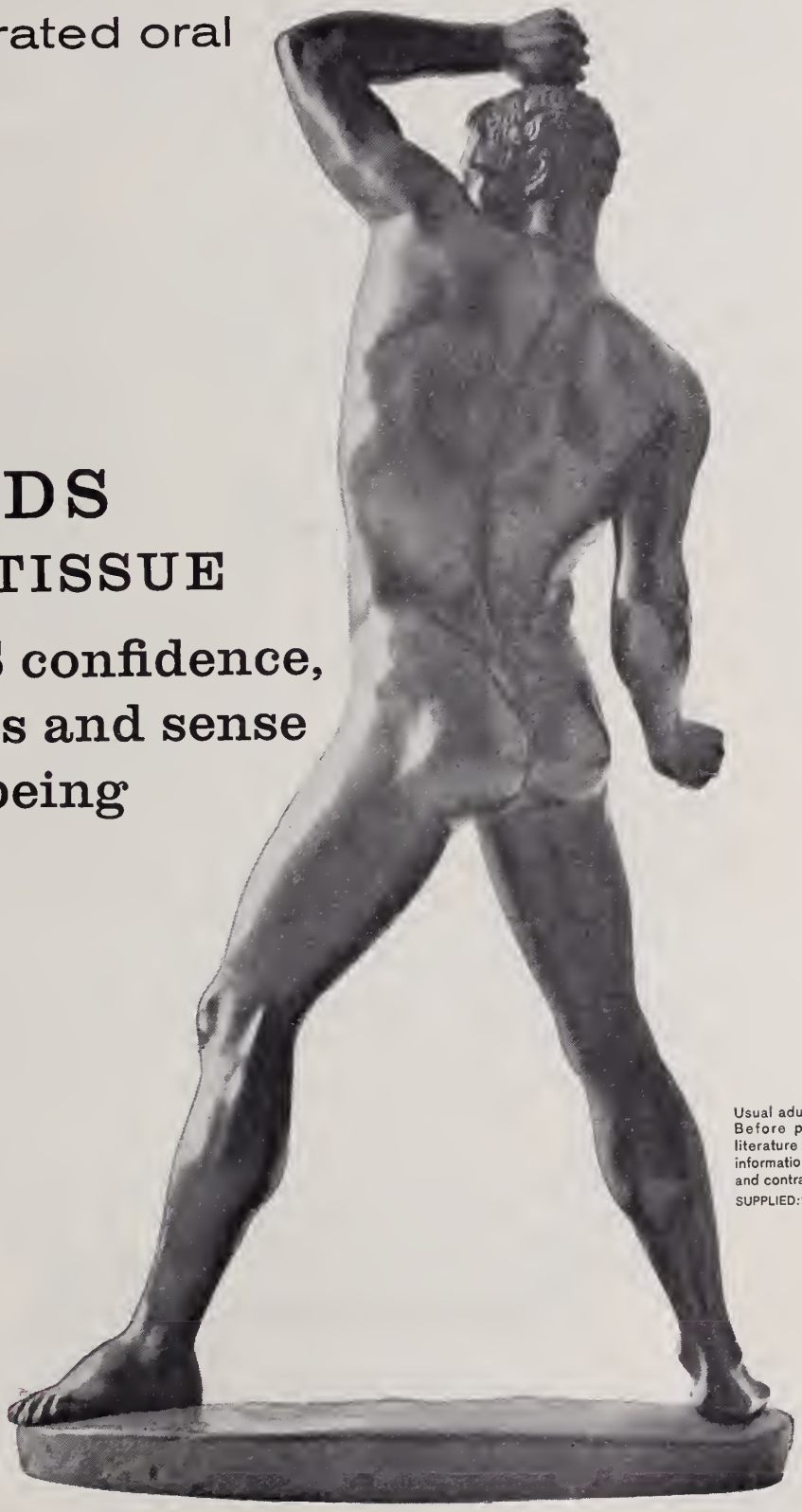
One NEPHENALIN tablet provides: *air in a hurry*—through sublingual isoproterenol HCl, 10 mg. *air for hours*—through theophylline, 2 gr.; ephedrine, ⅜ gr.; phenobarbital, ⅛ gr.
Dosage: Hold one NEPHENALIN tablet under the tongue for five minutes to abort the asthmatic attack promptly. Then swallow the tablet core for four full hours' protection against further attack. Only one tablet should be taken every four hours. No more than five tablets in 24 hours.
Supplied: Bottles of 50 tablets. For children: NEPHENALIN Pediatric, bottles of 50 tablets.
Caution: Do not administer NEPHENALIN with epinephrine. The two medications may be alternated at 4-hour intervals. NEPHENALIN should be administered with caution to patients with hyperthyroidism, acute coronary disease, cardiac asthma, limited cardiac reserve, acute myocardial damage, and to those hypersensitive to sympathomimetic amines. Phenobarbital may be habit forming. THOS. LEEMING & CO., INC., New York 17, N.Y.

THE SIGNIFICANT NEW PHYSIOTONIC

WINSTROL®

BRAND OF STANOZOLOL

well tolerated oral anabolic



BUILDS BODY TISSUE

BUILDS confidence, alertness and sense of well-being

Usual adult dose: 1 tablet t.i.d. Before prescribing, consult literature for additional dosage information, possible side effects and contraindications.

SUPPLIED: 2 mg. tablets. Bottles of 100.

Winthrop
LABORATORIES
New York 18, N. Y.

With WINSTROL, patients look better...feel stronger—because they are stronger

Browne-McHardy Clinics

MAIN CLINIC
3636 St. Charles Ave.
New Orleans 15, La.
TWinbrook 9-2376

GRAVIER ST. DIVISION
630 Gravier St.
New Orleans 12, La.
524-1605

VETERANS HIGHWAY DIVISION
8601 Veterans Memorial Hwy.
Metairie, La.
VErnon 3-7341

INTERNAL MEDICINE
Cardiology
Endocrinology
Gastroenterology
Hematology
Rheumatology

Donovan C. Browne, M. D.
Wiley H. Jenkins, M. D.
Robert C. Judice, M. D.
John T. Leckert, M. D.
G. Gordon McHardy, M. D.
Robert J. McHardy, M. D.
Thomas C. Roach, M. D.
Swan S. Ward, M. D.
George E. Welch, M. D.
Guy T. Williams, M. D

DERMATOLOGY
William Burroughs, M. D.

DISEASES OF THE CHEST
Joseph E. Blum, Jr., M. D.

EAR, NOSE and THROAT
Norma Kearby, M. D.

GENERAL SURGERY
Claude C. Craighead, M. D.
Raul G. Reyes, M. D.

OBSTETRICS and GYNECOLOGY
C. Gordon Johnson, M. D.
Robert I. Ayerst, M. D.
James M. Todd, Jr., M. D.

OPHTHALMOLOGY
Oliver H. Dabezies, M. D.

INDUSTRIAL MEDICINE
Ralph J. McDonough, M. D.
Horace A. Nabers, M. D.

PEDIATRICS
Carl E. Kemmerly, M. D.
Milton H. Donaldson, M. D.

RADIOLOGY and RADIOTHERAPY
Charles O'Dowd Lilly, M. D.
Joseph B. Marino, M. D.
Walter McDowell, M. D.

UROLOGY
John F. Lally, M. D.

AUXILIARY SERVICES
Cytology
Diabetics
Electroencephalograph
Endoscopy
Medical Laboratory
Pharmacy
Physical Therapy
Pulmonary Function Studies

Big Aseptic Advance Comes in a Tiny New Package!

NEW *Curity* WEBCOL ALCOHOL PREPS

One simple little packet now gives you a ready-to-use Alcohol Prep, *guaranteed* sterile. Full effective strength (70% Isopropyl Alcohol) assured; foil-poly-paper packet heat-sealed to prevent deterioration. The only ready-to-use Prep sterilized with ethylene oxide to kill alcohol-resistant spores.

In addition, the new Webcol Alcohol Prep eliminates considerable handling at all levels, eliminates possibility of contamination, saves time and labor. An ideal unit for doctor's bag and emergency kit, too.

Thrifty—no waste due to evaporation . . . no waste from excess saturation.

To prep for an injection in the safest, most convenient and economical way—use new *Curity* Webcol Alcohol Preps.

PEACOCK
SURGICAL COMPANY INC.
1235 TEXAS AVENUE
SHREVEPORT, LOUISIANA



...WITH 'METHEDRINE' SHE CAN HAPPILY REFUSE!



Controls food craving, keeps the reducer happy — In obesity, "our drug of choice has been methedrine . . . because it produces the same central effect with about one-half the dose required with plain amphetamine, because the effect is more prolonged, and because undesirable peripheral effects are significantly minimized or entirely absent." Douglas, H. S.: West.J.Surg. 59:238 (May) 1951.

'METHEDRINE'®

brand Methamphetamine Hydrochloride

Supplied: Tablets 5 mg., scored. Bottles of 100 and 1000.

Literature available on request.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, New York



they never even had a chance to complain about the cost of drugs

Walk through any older cemetery, and you will find the same ugly story repeated many times. Died, age 30 years... died, age 8 years... died, age 6 months.

Sometimes, you will see evidence of entire families being struck down almost simultaneously. You wonder, was it influenza? Diphtheria? Infectious diarrhea? Or a host of other diseases whose very names were synonymous with terror?
You will see, "Died, age 22 – childbirth."

There are many reasons why you don't see a continuation of these tragic stories today – not the least of which has been the dedication of American physicians and the quality of medical education. And another, we sincerely believe, has been the quality of medicines which have been made available.

Yet, the value of independent drug research has been seriously challenged – research which has, in the past 30 years alone, helped to add nearly 10 extra years to the average lifespan in the United States. Yet, because the cost of the search must be reflected in the price the patient pays for a prescription, is it too expensive to continue? Unfortunately, perhaps those who might have the best answer can offer only silent testimony.

This message is brought to you on behalf of the producers of prescription products.

A reproduction, for display in your waiting room, is available. Write:
PHARMACEUTICAL MANUFACTURERS ASSOCIATION • 1411 K STREET, N.W. • WASHINGTON, D.C.

Colds haven't changed— but relief has with NTz® NASAL SPRAY

NTz Nasal Spray gives on-the-spot relief for stopped-up noses instantly. Recommended by doctors for 10 years, it provides not one, but three powerful ways to fast relief.

In a carefully balanced formula, NTz contains:

Neo-Synephrine® HCl to shrink swollen nasal tissues and provide enough space for breathing

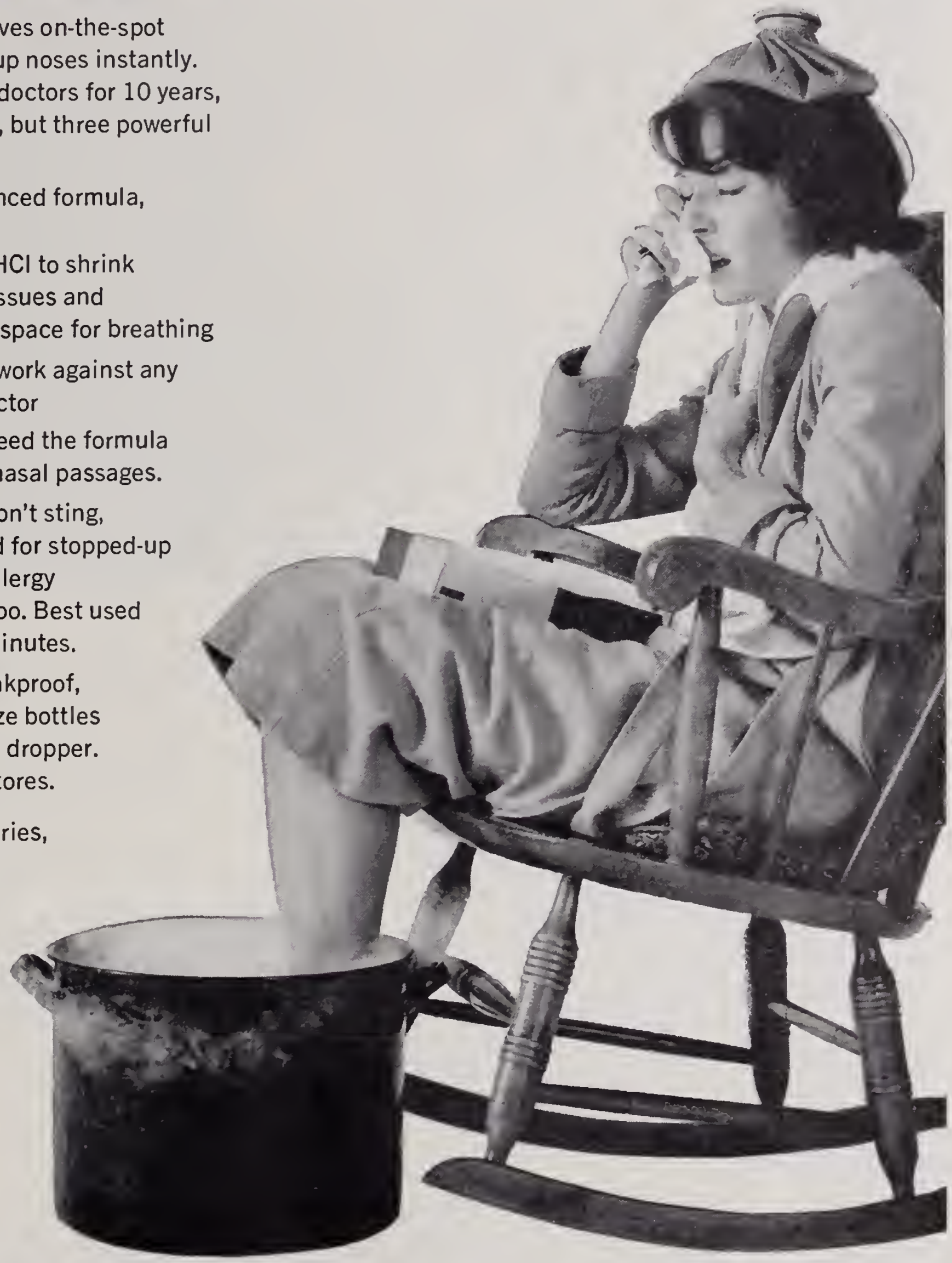
Thenfadil® HCl to work against any local allergic factor

Zephiran® Cl to speed the formula through **all** the nasal passages.

NTz Nasal Spray won't sting, won't irritate. Good for stopped-up noses caused by allergy and for sinusitis, too. Best used **twice** within five minutes.

NTz supplied in leakproof, pocket-size squeeze bottles and in bottles with dropper. Sold only in drugstores.

Winthrop Laboratories, New York 18, N. Y.



Winthrop

NTz, Neo-Synephrine (brand of phenylephrine), Thenfadil (brand of thenyldiamine) and Zephiran (brand of benzalkonium, as chloride, refined), trademarks reg. U. S. Pat. Off.

mudrane®

the bronchodilator
with the intermediate dose of KI

A combination of the four most widely used drugs for the treatment of asthma. Each Mudrane tablet contains Potassium Iodide 3 grains, Aminophylline 2 grains, Ephedrine HCl ¼ grain, Phenobarbital ⅓ grain . . . compounded for prompt absorption and balanced action, and buffered for tolerance.

Dispensed in bottles of 100 and 1000 tablets

WM. P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA

Manufacturers of ethical pharmaceuticals since 1856



Put your low-back patient back on the payroll

Soma relieves stiffness —stops pain, too

YOUR CONCERN: Rapid relief from pain for your patient. Get him back to his normal activity, *fast!*

HOW SOMA HELPS: Soma provides direct pain relief while it relaxes muscle spasm.

YOUR RESULTS: With pain relieved, stiffness gone, your patient is soon restored to full activity—often in days instead of weeks.

This was demonstrated by Kestler in a controlled study: average time for full recovery was 11.5 days with Soma, 41 days without Soma. (J.A.M.A. **172**:2039, April 30, 1960.)

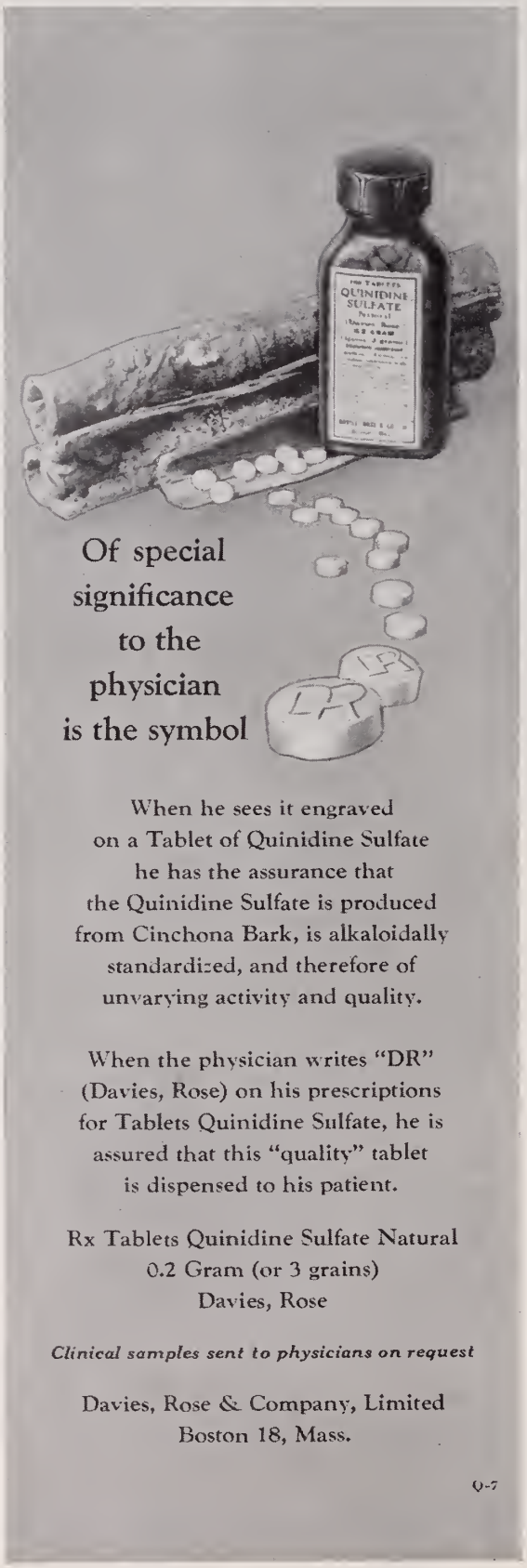
Soma is notably safe. Side effects are rare. Drowsiness may occur, but usually only in higher dosages. Soma is available in 350 mg. tablets.
USUAL DOSAGE: 1 TABLET Q.I.D.

The muscle relaxant with an independent pain-relieving action

SOMA®

(carisoprodol, Wallace)

Wallace Laboratories, Cranbury, New Jersey



Of special significance to the physician is the symbol

When he sees it engraved on a Tablet of Quinidine Sulfate he has the assurance that the Quinidine Sulfate is produced from Cinchona Bark, is alkaloidally standardized, and therefore of unvarying activity and quality.

When the physician writes "DR" (Davies, Rose) on his prescriptions for Tablets Quinidine Sulfate, he is assured that this "quality" tablet is dispensed to his patient.

Rx Tablets Quinidine Sulfate Natural
0.2 Gram (or 3 grains)
Davies, Rose

Clinical samples sent to physicians on request

Davies, Rose & Company, Limited
Boston 18, Mass.

Q-7

INDEX TO ADVERTISERS

Abbott Laboratories 11, 12
Ames Company, Inc. 22

Browne-McHardy Clinics 34
Burroughs Wellcome & Co. 9, 35

Davies, Rose & Co., Ltd. 40

First Texas Pharmaceuticals, Inc. 24

Katz & Besthoff, Ltd. 1

Lederle Laboratories 18, 19, 23, 28, 29
Leeming & Co., Inc., Thos. 32
Lilly & Company, Eli Front Cover, 20
Louisiana Coca-Cola Bottling Co. 1
Louisiana State Board of Health Second & Third Covers

Majors Company, J. A. 1

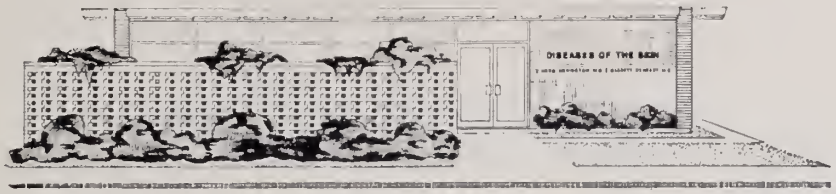
Parke, Davis & Company 6, 7
Peacock Surgical Co., Inc. 34
Pfizer Laboratories 14, 15
Pharmaceutical Manufacturers Association 36
Poythress & Company, Inc., Wm. P. 8, 38
Professional Cards 41, 42
Professional Management Service 10

Robins Company, A. H. 3, 4, 5, 27
Roche Laboratories Back Cover
Roerig & Co., Inc., J. B. 30, 31

Sardeau, Inc. 26
Saunders Company, W. B. 17
Searle & Company, G. D. 21
Smith Kline & French Laboratories 16

Wallace Laboratories 13, 25, 39
Winthrop Laboratories 2, 33, 37

PROFESSIONAL CARDS



Courtesy
Parking
Adjacent
to Building

BARRETT KENNEDY, M. D.

V. MEDD HENINGTON, M. D.

WM. J. PERRET, M. D.
(Associate)

DERMATOLOGY

4522 MAGNOLIA STREET

TWinbrook 1-4452 — 1-4453

Green Clinic

709 South Vienna Street — Ruston, Louisiana

Surgery
Marvin T. Green, M.D.
LaMoyne C. Bleich, M.D.

Obstetrics and Gynecology
Carl L. Langford, M.D.
David M. Hall, M.D.

Pediatrics
Bruce W. Everist, M.D.
O. Wharton Brown, Jr., M.D.

Eye, Ear, Nose and Throat
Harold H. Harms, M.D.

Radiology
M. Ragan Green, M. D.

Internal Medicine
Henry S. Roane, M.D.
Robert W. Sharp, M.D.
Joe L. Smith, Jr., M.D.

Dentistry
L. Felton Green, D.D.S.
Benjamin C. Baugh, D.D.

The Baton Rouge Clinic

134 North 19th St. — DI 8-5361

SURGERY
J. Sabatier, M. D.
Charles Mosely, M. D.
Charles S. Peter, Jr., M. D.

GYNECOLOGY & OBSTETRICS
Melvin Schudmak, M. D.
J. P. Griffon, M. D.
Donald C. Diefendorf, M. D.

UROLOGY
Mortimer Silvey, M. D.

GENERAL PRACTICE
Shirley J. Woodford, M. D.

INTERNAL MEDICINE
Charles Prosser, M. D.
Roger Reynolds, M. D.
(Allergy)
Bruce L. Baer, M. D.
(Gastroenterology)
Douglas Gordon, M. D.
(Endocrinology)
David D. Kahn, M. D.
(Hematology)

EYE
George H. Jones, M. D.

PHILIP RONALD LORIA, M. D.

DISEASES OF THE SKIN

Dermoplaning — **Removal of Excessive Hair**

1104 Maison Blanche Bldg. — New Orleans 16, La.
By Appointment — 524-9621

PROFESSIONAL CARDS

JOHN C. HARDIN, JR.
D.D.S., M.D., F.A.C.S.
Maxillo-Facial & Oral Surgery
(Head and Neck Surgery)
121 Physicians & Surgeons Bldg., West
Phone 3-6901 Shreveport, Louisiana

DR. NATHAN H. POLMER
Physical Medicine—Rehabilitation
2209 Carondelet St.
2 - 5 P. M.
Off.: JA 2-0171 Res.: JA 2-3946

JAMES W. BURKS, JR., M. D.
DISEASES OF THE SKIN
SURGICAL PLANING FOR COSMETIC DEFECTS
FACILITIES FOR REMOVAL OF SUPERFLUOUS HAIR
925 Maison Blanche Bldg.
New Orleans 16, La. 529-3322

DR. R. ROSS, JR.
SKIN DISEASES
802 Pere Marquette Bldg. JA 2-0202

DR. RICHARD W. VINCENT
PLASTIC AND RECONSTRUCTIVE SURGERY
34 Maes Court — Medical Plaza
3600 PRYTANIA STREET
TWinbrook 5-4561

LEWELL C. BUTLER, JR., M. D.
PLASTIC AND RECONSTRUCTIVE SURGERY
Phone 3-9671
211-213 Physicians and Surgeons Building West
803 Jordan Street Shreveport, Louisiana

JUSTILLIEN H. FORET, M. D.
Practice Limited to Psychiatry
3706 Prytania Street
899-2618 By Appointment

CHARLES I. BLACK, M. D.
DISEASES OF THE SKIN
4550 North Boulevard DIckens 3-2841
Baton Rouge, Louisiana

Business Management Consultants
for Individual Practices, Groups and Clinics
PROFESSIONAL MANAGEMENT SERVICE
700 Maison Blanche Bldg.
524-1177 New Orleans 16, La.

BLAISE SALATICH, D.D.S., M.D.
PRACTICE LIMITED TO ORTHOPEDIC SURGERY
1212 Maison Blanche Building
JAckson 2-7697 By Appointment

THE OWENS CLINIC
for
PLASTIC AND RECONSTRUCTIVE SURGERY
2223 Carondelet St. New Orleans 13, La.
Telephone: JAckson 2-0106
After Hours — Call Doctors' Exchange WH 5-4141

DR. HARTWIG M. ADLER
EYE, EAR, NOSE AND THROAT
Hours by appointment.
3439 Prytania Street TW. 1-4094
New Orleans

DR. CARL N. WAHL
Practice limited to
MAXILLO-FACIAL AND PLASTIC SURGERY
4500 Magnolia Street 891-6615

FRANK H. MAREK, M. D.
Radiologist
444 So. Ryan Street Lake Charles, La.
Phone HE 3-6361
Practice Limited to
X-ray and Radium Treatment and Diagnosis

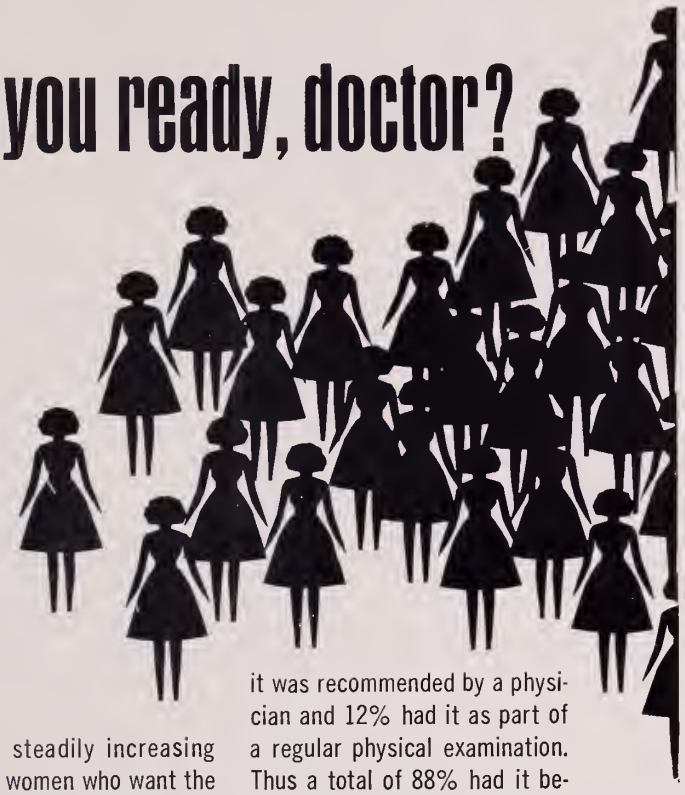
DR. HARRY ZOLLER
HEARING AND DEAFNESS
DISEASES AND SURGERY OF THE EAR
1109 Pere Marquette Building
JA. 5-2535 By Appointment

JOHN H. COUNCE, M. D.
Diseases of the Skin
1413 Delachaise St. New Orleans
Office Hours
By Appointment TW 1-2813

FREDERIC W. BREWER, M. D.
PRACTICE LIMITED TO PSYCHIATRY
1008 Maison Blanche Building
JA 5-4047 By Appointment

The Cancer Commission of the Louisiana State Medical Society

are you ready, doctor?



...for the steadily increasing number of women who want the "Pap" smear as part of their regular checkups? By 1961, the number who had this cytologic examination had climbed to an estimated 10,000,000!

While the American Cancer Society's educational program has succeeded in alerting women to the vital importance of the "Pap" smear, it is the physician who plays the key role. This was confirmed in a recent survey of women who had had the "Pap" smear. It was revealed that 76% had it because it was recommended by a physician and 12% had it as part of a regular physical examination. Thus a total of 88% had it because of physicians' actions.

As the number of uterine cytological examinations rises, the death rate from uterine cancer declines. Many authorities estimate that most deaths from this disease could be eliminated if these examinations were routinely performed. More and more women are ready for it and are willing to budget time and money for it. Are you ready for them, doctor?

AMERICAN CANCER SOCIETY

LOUISIANA DIVISION, INC.

204 Delta Building New Orleans 12, La.

Louisiana State Board of Health

W. J. REIN, M.D., President

specific for anxiety & tension

Librium

The singular specificity of Librium in controlling anxiety and tension has proven to be an advantage in a wide range of disorders characterized by anxiety of varying degrees. Notably effective in patients whose symptoms are primarily emotional, Librium is equally valuable when organic disease is aggravated or prolonged by accompanying anxiety. Coupled with its effectiveness is an outstanding record of safety. Librium has few, if any, of the unwanted side effects associated with tranquilizers and daytime sedatives—no extrapyramidal effects, no autonomic blocking, and no dulling of mental alertness. Consult literature and dosage information, available on request, before prescribing.

the successor to the tranquilizers

LIBRIUM® Hydrochloride—7-chloro-2-methylamino-5-phenyl-3H-1,4-benzodiazepine 4-oxide hydrochloride



ROCHE

NAL of the LOUISIANA STATE MEDICAL SOCIETY

LOUISIANA STATE MEDICAL SOCIETY

Formerly NEW ORLEANS MEDICAL and SURGICAL JOURNAL
OFFICIAL ORGAN OF THE LOUISIANA STATE MEDICAL SOCIETY

MARCH, 1963

Copyright 1963 by
siana State Medical Society.
0 per annum, 35¢ per copy

Vol. 115, No. 3

Published monthly by
The Journal of the Louisiana State
Medical Society, Inc.
1430 Tulane Ave., New Orleans 12

Contents



Complications of Drug Therapy in Hypertension 75
Jorge I. Martinez-Lopez, M. D., New Orleans

Recent Trends in the Management of Hypertension 80
John T. Leckert, M. D., New Orleans

Clinical Experiences with Renal Hypertension 88
J. L. Boudreaux, M. D., Lafayette, H. M. Radwin, M. D., P. D. Diggdon, M. D., and J. U. Schlegel, M. D., New Orleans

Two-Hour Oral Cholecystography 92
Charles M. Nice, Jr., M. D., Ph. D., Ramon A. Mouton, M. D., and Manuel Roy, M. D., New Orleans

Cholecystitis and Cholelithiasis in the Young 96
Robert Kapsinow, M. D., Lafayette

The Highly Ingrown Nail 98
Fred A. Marx, M. D., Monroe

Editorial 100

Organization Section 102

Medical News Section 105

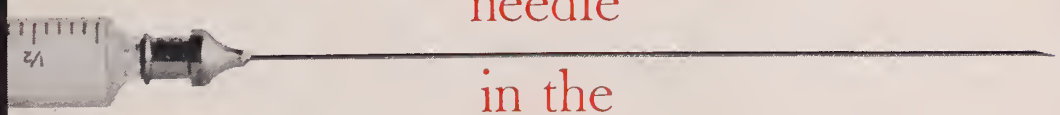
Book Reviews 106

Index to Advertisers 38

ANNUAL MEETING—MAY 6-8, 1963—NEW ORLEANS

LIBRARY
MAR 27 1963
NEW YORK ACADEMY OF MEDICINE

the longest "needle" in the world



It never stings—needs no sterilizing. It reaches all the way from your office to the patient's home to give him potent penicillin therapy as often and as long as he needs it. It's an *oral* "needle," of course . . . V-Cillin K®. . . the penicillin that makes oral therapy as effective as intramuscular, but safer—and much more pleasant.

V-Cillin K® (potassium phenoxymethyl penicillin, Lilly) (penicillin V potassium)

Sometimes your judgment dictates parenteral penicillin for your office patients. But to extend that therapy, take advantage of the longest "needle" in the world . . . V-Cillin K.

Tablets V-Cillin K, 125 or 250 mg. (scored).

V-Cillin K, Pediatric, 125 mg. per 5 cc., in 40 and 80-cc.-size packages.

This is a reminder advertisement. For adequate information for use, please consult manufacturer's literature. Eli Lilly and Company, Indianapolis 6, Indiana.

Lilly

233280

Announcing

The Twenty-Sixth Annual Meeting

of

THE NEW ORLEANS GRADUATE MEDICAL ASSEMBLY

Conference Headquarters — Roosevelt Hotel

March 4, 5, 6, 7, 1963

GUEST SPEAKERS

John R. Haserick, M. D., Cleveland, Ohio
Dermatology

Henry J. Tumen, M. D., Philadelphia, Pa.
Gastroenterology

Logan T. Robertson, M. D., Asheville, N. C.
General Practice

Andrew A. Marchetti, M. D., Washington, D. C.
Gynecology

Raymond D. Pruitt, M. D., Houston, Tex.
Internal Medicine

Paul S. Rhoads, M. D., Chicago, Ill.
Internal Medicine

C. H. Hardin Branch, M. D., Salt Lake City, U.
Neuropsychiatry

J. Robert Willson, M. D., Philadelphia, Pa.
Obstetrics

James I. Moore, M. D., Baltimore, Md.
Ophthalmology

James E. Bateman, M. D., Toronto, Ont., Can.
Orthopedic Surgery

Joseph H. Ogura, M. D., St. Louis, Mo.
Otolaryngology

Edward A. Gall, M. D., Cincinnati, Ohio
Pathology

Col. F. M. Townsend, MC, USAF, Wash., D. C.
Pathology

Weston M. Kelsey, M. D., Winston-Salem, N. C.
Pediatrics

Curtice Rosser, M. D., Dallas, Tex.
Proctology

Ted F. Leigh, M. D., Atlanta, Ga.
Radiology

John L. Keeley, M. D., Chicago, Ill.
Surgery

John L. Madden, M. D., New York, N. Y.
Surgery

Edwin P. Alyea, M. D., Durham, N. C.
Urology

Lectures, symposia, clinicopathologic conferences, round-table luncheons, medical motion pictures, technical exhibits and entertainment for visiting wives.

(All-inclusive registration fee — $20.00)

Sponsored in cooperation with the Louisiana Chapter of the American Academy of General Practice. Acceptable for twenty-nine (29) hours Category I Credit.

THE CLINICAL TOUR TO MEXICO VISITING MEXICO CITY, CUERNAVACA, TAXCO AND ACAPULCO

Leaving March 8 via air and returning March 23, 1963
(Optional extensions may be arranged)

For information concerning the Assembly meeting and tour write Secretary, Room 105, 1430 Tulane Avenue, New Orleans 12, La.

Louisiana State Board of Health

W. J. REIN, M.D.,

President



BOTTLED UNDER AUTHORITY OF THE COCA-COLA COMPANY BY
THE LOUISIANA COCA-COLA BOTTLING CO., LTD.



You Know--

that we know!

TRUSTED MANY MILLIONS OF TIMES

GOOD DRUG STORES ONLY THE BEST
Katz & Besthoff, Inc.

Prescription Headquarters Since 1905

MEDICAL BOOKS

Of All Publishers

Any book on Medicine, Surgery, and Nursing

J. A. MAJORS COMPANY

147 South Liberty St.

NEW ORLEANS 12, LA.

——Catalogs cheerfully sent upon request——

REGISTERED NURSES

Challenging careers in Psychiatric Nursing.

Beginning salaries from $4,290 to $6,660, depending upon experience.

Excellent fringe benefits.

Ideal location in Baltimore-Washington area.

Contact Director of Nurses

Crownsville State Hospital

Crownsville, Maryland



Day and night- less wheezing, coughing, labored respiration in chronic bronchitis and emphysema

New Isuprel Compound Elixir is a balanced expectorant bronchodilator. It contains potassium iodide to promote expectoration and relieve dry cough. Its three bronchodilators, Isuprel, ephedrine, and theophylline, keep bronchi continuously dilated. Luminal is included to negate possible side effect from adrenergic medication and to provide very mild sedation for the patient.

New Isuprel Compound Elixir alleviates symptoms...prolongs relief in chronic bronchitis and emphysema.

Each good-tasting vanilla-flavored tablespoon (15 cc.) contains:

Isuprel® (brand of isoproterenol) HCl	2.5 mg.
Ephedrine sulfate	12 mg.
Theophylline	45 mg.
Potassium iodide	150 mg.
Luminal® (brand of phenobarbital)	6 mg.
Alcohol	19%

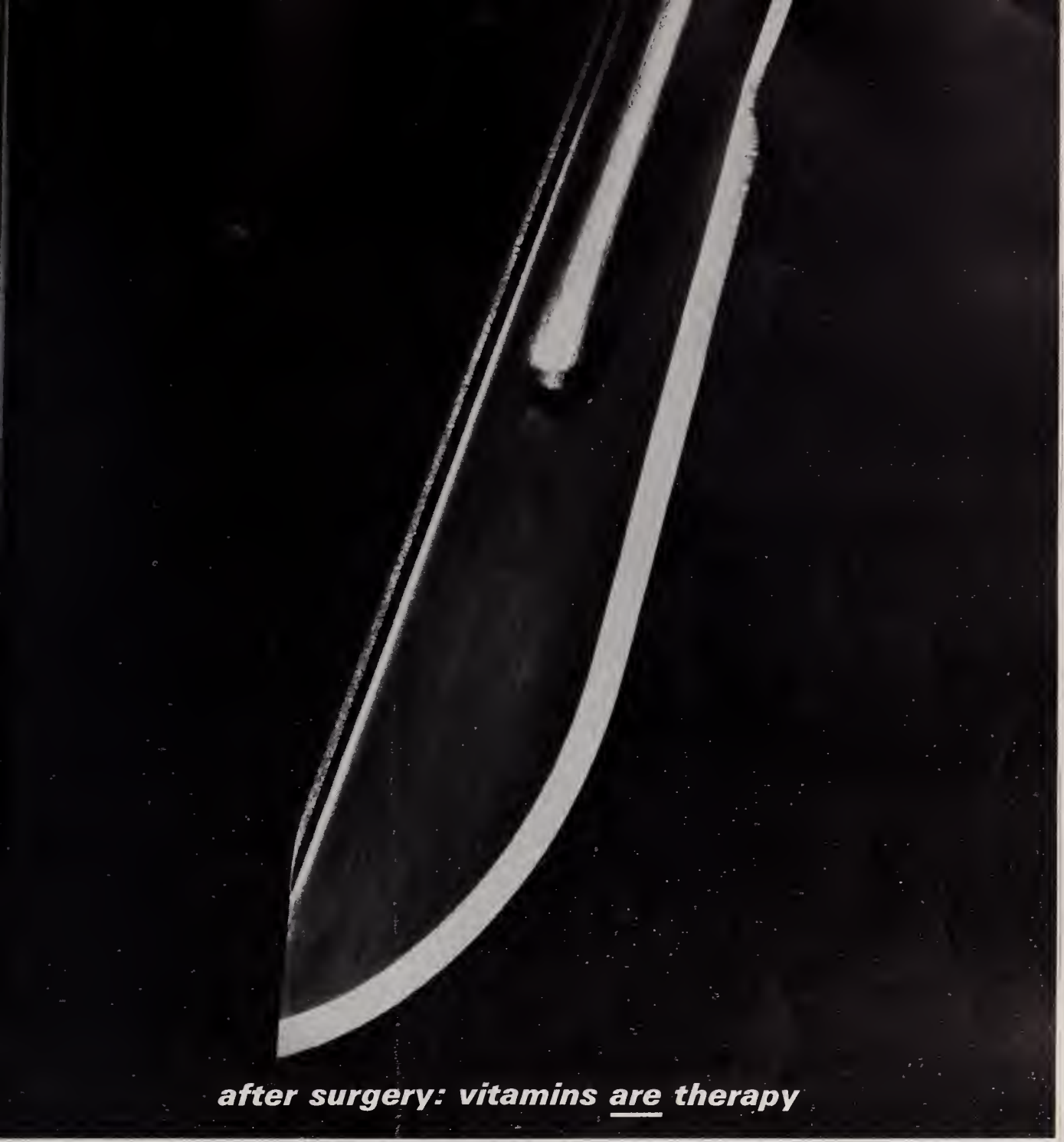
Adult Dose: 2 tablespoons 3 or 4 times daily.

How Supplied: Isuprel Compound Elixir is supplied in bottles of 16 fl. oz.

New ISUPREL® compound ELIXIR

Winthrop LABORATORIES
New York 18, N.Y.

ISUPREL AND LUMINAL, TRADEMARKS REG. U. S. PAT. OFF.



after surgery: vitamins are therapy

Nutritional supplementation is basic to postoperative care. Therapeutic allowances of B and C vitamins help meet increased metabolic requirements and compensate for stress depletion. STRESSCAPS can set the patient on a more favorable course and contribute to full recovery. Packaged in decorative "reminder" jars of 30 and 100.

Each capsule contains:	
Vitamin B_1 (Thiamine Mononitrate)	10 mg.
Vitamin B_2 (Riboflavin)	10 mg.
Niacinamide	100 mg.
Vitamin C (Ascorbic Acid)	300 mg.
Vitamin B_6 (Pyridoxine HCl)	2 mg.
Vitamin B_{12} Crystalline	4 mcgm.
Calcium Pantothenate	20 mg.

Recommended intake: Adults, 1 capsule daily, or as directed by physician, for the treatment of vitamin deficiencies.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.

STRESSCAPS®

Stress Formula Vitamins Lederle

in severe respiratory infections
refractory to other measures..

CHLOROMYCETIN®

(chloramphenicol, Parke-Davis)

for established clinical efficacy against susceptible organisms[1-14]



In Friedlander's Pneumonia[3,13]

Although the prognosis in Friedlander's pneumonia is poor, treatment with CHLOROMYCETIN has shown a good response when susceptible strains of *Klebsiella pneumoniae* are incriminated.

In *Hemophilus Influenzae* Pneumonia[3,4,13,14]

Because the invading organism is usually sensitive to CHLOROMYCETIN, this agent is generally effective in pneumonias caused by *H. influenzae*.

In Staphylococcal Pneumonia[1-8,13]

CHLOROMYCETIN continues to remain effective against many resistant strains of staphylococci, and—alone or in combination with other antibiotics—should be considered when other antistaphylococcal drugs are ineffective.

In Acute Epiglottitis[4,10,11]

This condition is most often caused by *H. influenzae*, most strains of which are sensitive to CHLOROMYCETIN. Therapy should be instituted at once, since the disease may progress from the first symptoms to a severe respiratory obstruction in four to six hours.

In Pneumonias Due to Gram-negative Bacilli[9]

Because of its broad-spectrum activity, CHLOROMYCETIN is often effective in pneumonias caused by sensitive strains of *Aerobacter, Proteus* of various species, *Paracolobactrum,* and other gram-negative pathogens encountered with increasing frequency in serious respiratory tract infections.

In Staphylococcal Empyema[12]

The infiltrating lesions of staphylococcal empyema are often difficult to eradicate. While CHLOROMYCETIN should only be used when the infection has been resistant to treatment with other antistaphylococcal drugs, therapy with CHLOROMYCETIN, in conjunction with surgical procedures, will often bring favorable results.

CHLOROMYCETIN (chloramphenicol, Parke-Davis) is available in various forms, including Kapseals® of 250 mg., in bottles of 16 and 100. See package insert for details of administration and dosage.

Warning: Serious and even fatal blood dyscrasias (aplastic anemia, hypoplastic anemia, thrombocytopenia, granulocytopenia) are known to occur after the administration of chloramphenicol. Blood dyscrasias have occurred after both short-term and prolonged therapy with this drug. Bearing in mind the possibility that such reactions may occur, chloramphenicol should be used only for serious infections caused by organisms which are susceptible to its antibacterial effects. Chloramphenicol should not be used when other less potentially dangerous agents will be effective, or in the treatment of trivial infections such as colds, influenza, or viral infections of the throat, or as a prophylactic agent.

Precautions: It is essential that adequate blood studies be made during treatment with the drug. While blood studies may detect early peripheral blood changes, such as leukopenia or granulocytopenia, before they become irreversible, such studies cannot be relied upon to detect bone marrow depression prior to development of aplastic anemia.

References: (1) Thacher, H. C., & Fishman, L.: *J. Maine M. A.* **52**:84, 1961. (2) Hopkins, E. W.: *Postgrad. Med.* **29**:451, 1961. (3) Hall, W. H.: *M. Clin. North America* **43**:191, 1959. (4) Krugman, S.: *Pediat. Clin. North America* **8**:1199, 1961. (5) Ede, S.; Davis, G. M., & Holmes, F. H.: *J.A.M.A.* **170**:638, 1959. (6) Wolfsohn, A. W.: *Connecticut Med.* **22**:769, 1958. (7) Calvy, G. L.: *New England J. Med.* **259**:532, 1958. (8) Hendren, W. H., III, & Haggerty, R. J.: *J.A.M.A.* **168**:6, 1958. (9) Cutts, M.: *Rhode Island M. J.* **43**:388, 1960. (10) Berman, W. E., & Holtzman, A. E.: *Califarnia Med.* **92**:339, 1960. (11) Vetto, R. R.: *J.A.M.A.* **173**:990, 1960. (12) Sia, C. C. J., & Brainard, S. C.: *Hawaii M. J.* **17**:339, 1958. (13) Rosenthal, I. M.: *GP* **17**:77 (March) 1958. (14) Gaisford, W.: *Brit. M. J.* 1:230, 1959.

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit 32, Michigan

03863

mudrane® GG

GLYCERYL GUAIACOLATE LIQUEFIER-EXPECTORANT

A combination of widely used drugs for the treatment of asthma. Each tablet contains *Glyceryl Guaiacolate 100 mg., Aminophylline 130 mg., Ephedrine HCl 16 mg., Phenobarbital 21 mg. . . . compounded for balanced action and buffered for tolerance.

*Glyceryl Guaiacolate has no known side effects.

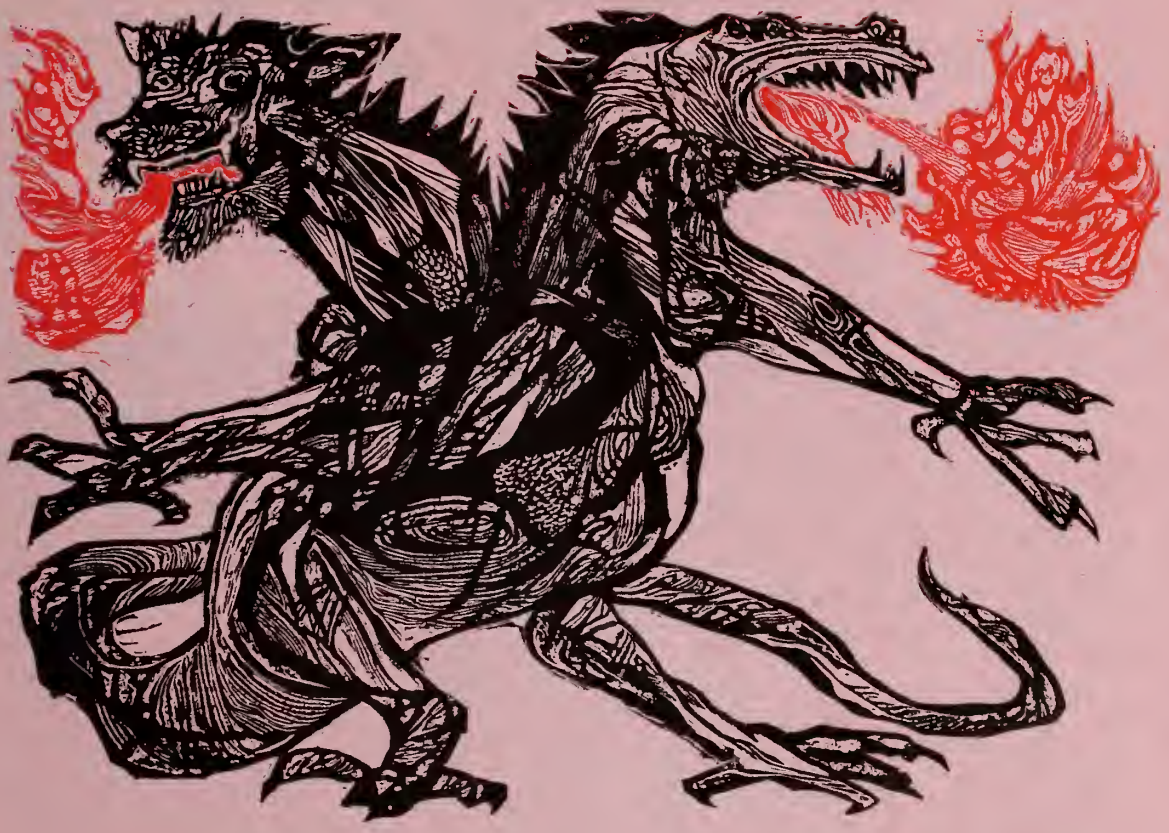
COMPLETE INFORMATION AND CLINICAL SAMPLES
SENT UPON REQUEST

Dispensed in bottles of 100 and 1000 tablets

WM. P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA

Manufacturers of ethical pharmaceuticals since 1856

When severe pain accompanies skeletal muscle spasm ease both 'pain & spasm'



with **Robaxisal**®

ROBAXIN® with Aspirin

A dual-acting skeletal muscle relaxant-analgesic, combining the clinically proven relaxant action of ROBAXIN with the time-tested pain relieving action of aspirin.

Each ROBAXISAL Tablet contains:
ROBAXIN (methocarbamol Robins) 400 mg. Acetylsalicylic acid (5 gr.)..... 325 mg.
U.S. Pat. No. 2770649

Supply: Bottles of 100 and 500 pink-and-white laminated tablets.

Or ROBAXISAL®-PH (ROBAXIN with Phenaphen®) — when anxiety is associated with painful skeletal muscle spasm.

Each ROBAXISAL-PH Tablet contains:
ROBAXIN (methocarbamol Robins) 400 mg. Acetylsalicylic acid 81 mg.
Phenacetin 97 mg. Hyoscyamine sulfate 0.016 mg. Phenobarbital (1/8 gr.) 8.1 mg.
Supply: Bottles of 100 and 500 green-and-white laminated tablets.

A. H. ROBINS CO., INC., Richmond 20, Virginia

Making today's medicines with integrity... seeking tomorrow's with persistence.

PROFESSIONAL MANAGEMENT SERVICE CAN HELP YOU BE A

FULL-TIME DOCTOR



Delegation of time-consuming work not requiring your training and experience releases you to more productive and rewarding work only you can do. The Professional Management Service is equipped to save you time . . . to relieve you and your staff of both menial and critical business tasks . . . and to increase your income. Our service offers you the benefits of specially trained, and equipped personnel under the careful supervision of specialists in medical business management, however you maintain complete control of your business activities!

We Offer These Services -

ACCOUNTS RECEIVABLE MANAGEMENT Professional Management Service trained bookkeepers, electric equipment and modern, proven-in-use methods designed to the needs of medical accounts are used to minimize the business workload in your office. Professional, accurate, itemized statements encourage prompt payment. This service pays big dividends in good will, time savings and net dollar return.

CONSULTATION Professional Management Service also includes special services, as needed, such as counseling on all insurance, investments, office personnel, fees, office lay-out, etc.

BASIC BOOKKEEPING SERVICE Formal accounting records are maintained by Professional Management Service. This includes income and expenses, depreciation, capital accounts, monthly financial report and tax return preparation.

PRE-COLLECTION PROGRAM A constructve approach to slow-paying accounts, subject to your control, this service is used with the ARM Service, above, or to supplement billing by your own staff. Custom designed to your needs and policies, but all time-consuming work is done by Professional Management Service.

COMPREHENSIVE BUSINESS SERVICE Most beneficial to physicians is the assumption of the complete business side of practice by the Professional Management Service in a co-ordinated, comprehensive service encompassing all functions named above.



PROFESSIONAL MANAGEMENT SERVICE

New Orleans, Louisiana

700 MAISON BLANCHE BLDG., PHONE 524 1177

A Specialized Service . . . Exclusively Professional

EVERYBODY DOES IT





Toot! We have a nice little bargain, too...

Accustomed as we are to talking about purity, potency, stability, things like that, we thought you might like to know that mothers can make a nice saving on Vi-Daylin Chewables for the next few weeks. Nothing complicated. She buys a bottle of 100 at the regular price. She gets a bottle of 30 free. Big deal? Well, not a bad one. It means she's getting her Vi-Daylin for less than 3¢ per daily dose per child. You might find some vitamins somewhere that would cost even less. But will the youngsters take them?

Vi-Daylin—Vitamins A, D, B_1, B_2, B_6, B_{12}, C, and Nicotinamide, Abbott

301079

ABBOTT 75TH ANNIVERSARY



These Chewables Taste as Good as They Look

(AND THEY'RE SUGAR-FREE, THANKS TO SUCARYL®)

First cousin to an orange. Next door neighbor to a lemon – that's new VI-DAYLIN® CHEWABLE with *Entrapped* Flavor.

They look like footballs and smell like candy and you've never tasted a chewable vitamin quite like them. What surprises you is not so much what you taste as what you *don't* taste. Vitamins. They simply don't come through – either in taste or aftertaste. Even the riboflavin is trapped and civilized.

Our dual coating process does it – seals the raw vitamin tastes, protects the delicate flavoring agents. Releases the sweet citrus flavor in the mouth, the vitamins in the g-i tract. With *both* vitamins and flavors entrapped, there's just no chance of the tablets turning musty in the bottle.

Rational formula. And sweetened with sugar-free SUCARYL.

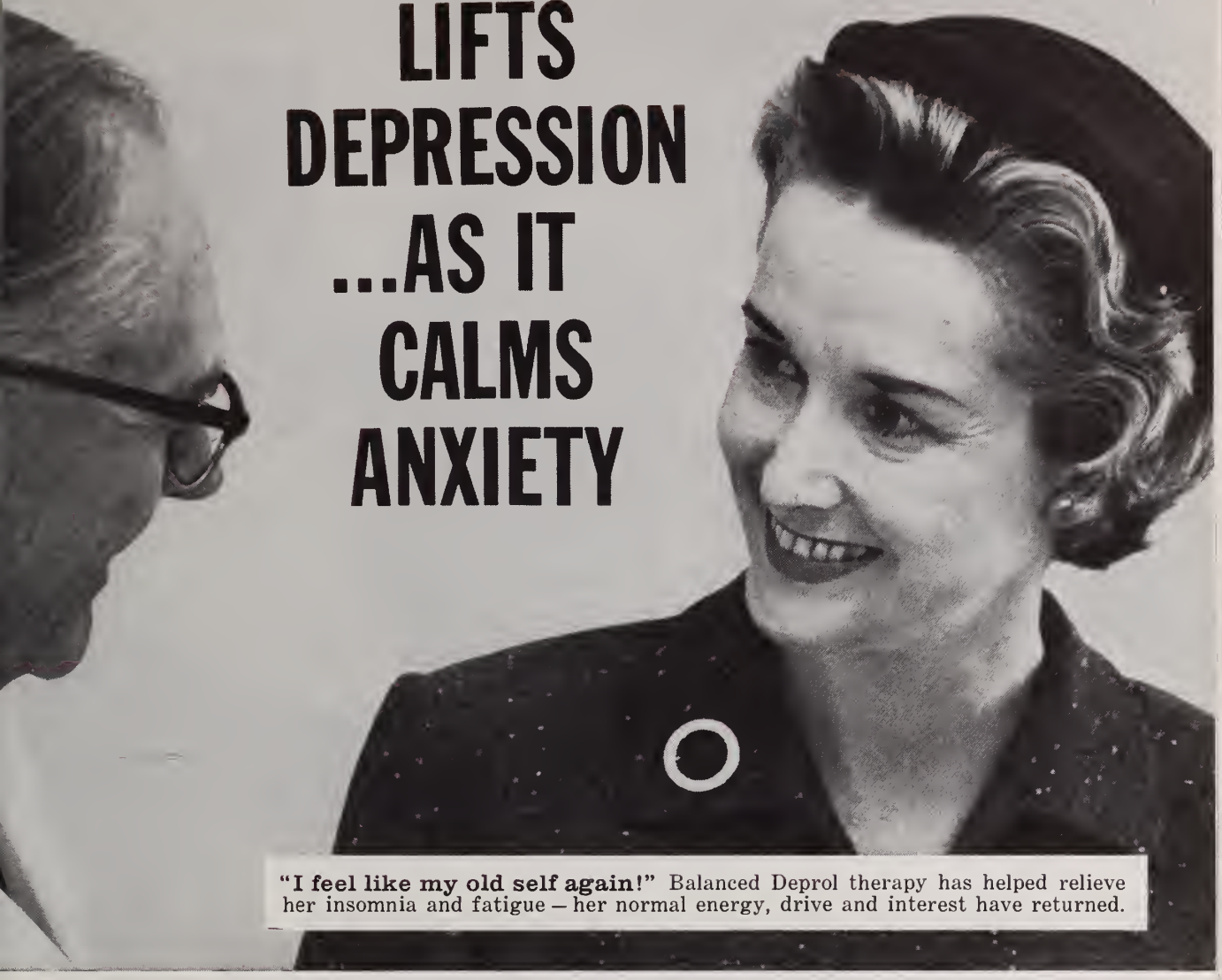
If they look good to you, imagine what youngsters will think.

75TH ANNIVERSARY ABBOTT



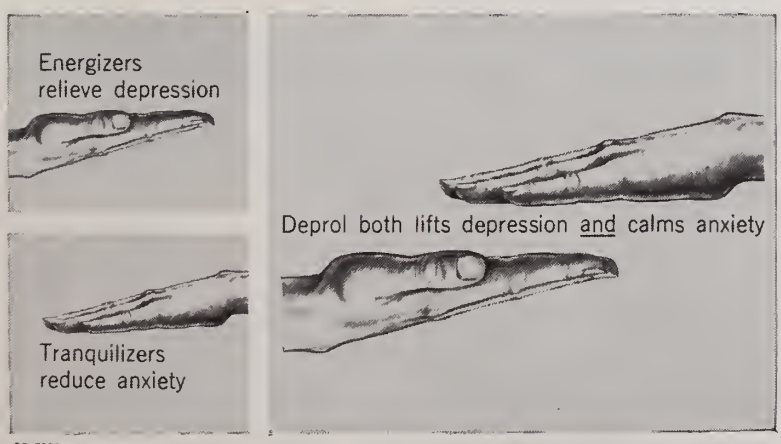
SUCARYL–Abbott's Non-Caloric Sweetener.
VI-DAYLIN–Vitamins A, D, B_1, B_2, B_6, B_{12}, C, and Nicotinamide, Abbott.

LIFTS DEPRESSION ...AS IT CALMS ANXIETY



"I feel like my old self again!" Balanced Deprol therapy has helped relieve her insomnia and fatigue – her normal energy, drive and interest have returned.

Brightens mood...relaxes tension



CD-7393

Dosage: Usual starting dose is 1 tablet q.i.d. When necessary, this may be increased gradually up to 3 tablets q.i.d. With establishment of relief, the dose may be reduced gradually to maintenance levels.

Composition: 1 mg. 2-diethylaminoethyl benzilate hydrochloride (benactyzine HCl) and 400 mg. meprobamate.

Supplied: Bottles of 50 light-pink, scored tablets.

Write for literature and samples.

▲Deprol▲®

WALLACE LABORATORIES
Cranbury, N. J.



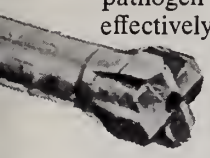
from tabardilho in Brazil to acute bronchitis in Louisiana

there is a world of experience behind BRAND OF OXYTETRACYCLINE **Terramycin**

Whether treating *tabardilho* or a host of other infections, physicians throughout the world continue to rely on TERRAMYCIN for its outstanding safety, effectiveness and excellent tolerability. Not a single case of phototoxic reaction, blood dyscrasia or neurologic disturbance directly attributable to TERRAMYCIN has been reported in more than 3,000 clinical papers in the last 12 years. *In your practice, the next infection you see will very likely be "Terra-responsive."*

Tabardilho, a type of tick typhus, is probably an analog of Rocky Mountain spotted fever, and is caused by *Rickettsia rickettsii.* The tick vectors are any of several species of amblyomma.* The natural reservoirs are the opossum, dogs, the wild rabbit, and the agouti,* a rodent about the size of a rabbit. Mortality is reported to run as high as 80%.

Usually, a lesion is found at the bite site with accompanying regional lymphadenitis.* Actual onset is abrupt with severe headache, arthralgias, myalgias, prostration, extremely high fever, and a marked leukocytosis. A distinctive rash appears about the fourth febrile day; discolorations may persist for several weeks during convalescence. The pathogen grows readily in the yolk sac of the developing chick embryo.* *Tabardilho* is effectively treated by TERRAMYCIN. **illustrated*



IN BRIEF The dependability of Terramycin in daily practice is based on its broad range of antimicrobial effectiveness, excellent toleration, and low toxicity. As with other broad-spectrum antibiotics, overgrowth of nonsusceptible organisms may develop. If this occurs, discontinue the medication and institute appropriate specific therapy as indicated by susceptibility testing. Glossitis and allergic reactions to Terramycin are rare. For complete information on Terramycin dosage, administration, and precautions, consult package insert before using. *More detailed professional information available on request.*

Science for the world's well-being®

Pfizer

PFIZER LABORATORIES Division, Chas. Pfizer & Co., Inc.
New York 17, New York



"The first prescription I ever wrote was for 'Empirin' with Codeine...



and it is still my stand-by for pain relief today."

PICTURE THE YOUNG DOCTOR with his first private patient, about thirty-five years ago. This is the moment, after years of study and guidance in classroom and at hospital bedside, when he assumes the full weight of responsibility for the well-being of his patient. He makes his diagnosis. The patient is in considerable pain, and his first concern is to relieve this discomfort. He writes a prescription for a new analgesic, a convenient drug combination that he believes will be of help. This patient (and many others to follow) finds gratifying relief, and the physician continues to rely upon this medication as the years go by.

Could this have been you in the 1920's? That was when 'Empirin' Compound with Codeine first came into general use (although plain 'Empirin' Compound has been well-known since the influenza epidemic of 1918). Satisfaction through the years has prompted doctors everywhere to depend on 'Empirin' with Codeine for relief of most all degrees of pain. For with this well-tolerated, reliable analgesic combination you can be sure of results, and feel secure in the fact that the liability of addiction is negligible.

Please accept our thanks for continuing to place your trust in a product that has been used more widely in medicine each year for the past four decades.

'EMPIRIN' COMPOUND with CODEINE PHOSPHATE*

Acetophenetidin, gr. 2½
Acetylsalicylic Acid, gr. 3½
Caffeine, gr. ½

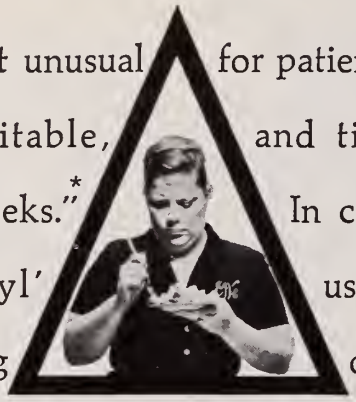
Remember there are now four strengths available...

*Warning—May be habit-forming.
Subject to Federal Narcotic Regulations.

No. 1 – gr. ⅛
No. 2 – gr. ¼
No. 3 – gr. ½
No. 4 – gr. 1

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N. Y.

WHAT IS SO IMPORTANT ABOUT THE MOOD-ELEVATING EFFECT OF DEXAMYL® IN OVERWEIGHT?



"It is not unusual for patients on a low-calorie diet to feel low, irritable, and tired during the first two or three weeks."* In contrast, the dieting patient on 'Dexamyl' usually gains a brighter outlook, a feeling of energy and general well-being, and, most important, confidence that she really can lose weight after all! In addition to its mood effect, one 'Dexamyl' Spansule® sustained release capsule taken in the morning effectively curbs appetite all day—both at and between meals.



Matlin, E.: The Obvious in Obesity, Clin. Med. 8:1071 (June) 1961.

FORMULA: Each 'Dexamyl' *Spansule* capsule No. 2 contains 15 mg. of Dexedrine® (brand of dextro amphetamine sulfate) and 1½ gr. of amobarbital, derivative of barbituric acid [Warning, may be habit forming]. Each 'Dexamyl' *Spansule* capsule No. 1 contains 10 mg. of 'Dexedrine' (brand of dextro amphetamine sulfate) and 1 gr. of amobarbital [Warning, may be habit forming]. The active ingredients of the 'Spansule' capsule are so prepared that a therapeutic dose is released promptly and the remaining medication, released gradually and without interruption, sustains the effect for 10 to 12 hours.

INDICATIONS: (1) For control of appetite in overweight; (2) for mood elevation in depressive states.

USUAL DOSAGE: One 'Dexamyl' *Spansule* capsule taken in the morning for 10- to 12-hour therapeutic effect.

SIDE EFFECTS: Insomnia, excitability and increased motor activity are infrequent and ordinarily mild.

CAUTIONS: Use with caution in patients hypersensitive to sympathomimetic compounds or barbiturates and in coronary or cardiovascular disease or severe hypertension.

SUPPLIED: Bottles of 50 capsules.

Smith Kline & French Laboratories SK&F *Prescribing information October 1962*

advancing or complicated hypertension responds to

new Naquival®

brand of trichlormethiazide and reserpine

with STEP-BY-STEP reduction (no sudden drops[1-4]) of elevated blood pressure ☐ relief of associated headache,[3,4] dizziness,[2-4] edema,[2-5] anxiety and tension[1] ☐ simplified dosage (twice daily)...long-term economy

(With new NAQUIVAL there are no reported toxic effects,[2-5] side effects are minor and infrequent,[1-5] and salt restriction[1,5] or added potassium[1] is rarely needed.)

Supplied: NAQUIVAL Tablets, containing 4 mg. trichlormethiazide and 0.1 mg. reserpine, bottles of 100.

References: (1) Ernst, E. M.: Current Therap. Res. **3**:167, 1961. (2) Starling, R. J.: J.M.A. Georgia **50**:442, 1961. (3) Sprogis, G. R.: Current Therap. Res. **3**:393, 1961. (4) Coffee, H. L.: Clin. Med. **69**:1561, 1962. (5) Mattey, W. E.: Indust. Med. **31**:33, 1962.

Schering

mild or moderate hypertension responds to

Naqua®

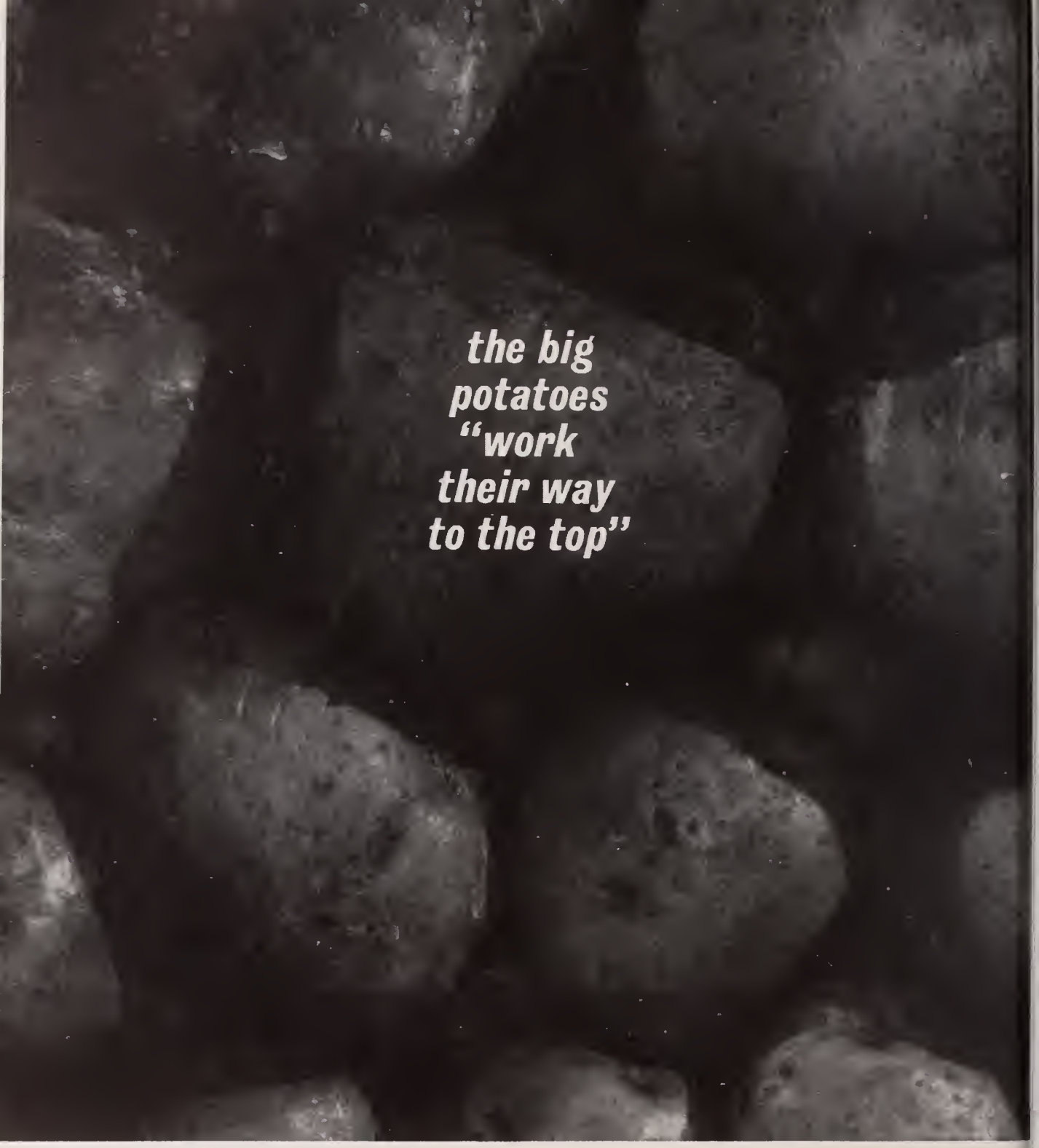
brand of trichlormethiazide

Reduces elevated blood pressure while providing symptomatic relief...permits more normal activities...liberalizes salt intake...in severe hypertension, potentiates other antihypertensives...as a diuretic, controls edema with minimal, once-daily dosage.

Supplied: NAQUA Tablets, 2 and 4 mg., scored, bottles of 100 and 1000.

For complete details concerning NAQUIVAL and NAQUA, consult Schering literature available from our Schering Representative or Medical Services Department, Schering Corporation, Bloomfield, N. J.

S-160



Jostle a peck of potatoes long enough and the little ones will fall to the bottom; the big ones work their way to the top. So do the larger particles of an admixture of powdered chemicals. Unless steps are taken to keep particle sizes uniform, the active ingredients will not be evenly dispersed throughout an excipient. That is why Lilly pharmaceutical chemists establish precise specifications; maintain rigid controls. A few more steps are added and the cost is slightly increased, but priceless uniformity is assured in the finished product.

Eli Lilly and Company • Indianapolis 6, Indiana, U. S. A.

Lilly

390024

The Journal
of the
Louisiana State Medical Society

$4.00 Per Annum, 35c Per Copy
Vol. 115, No. 3

MARCH, 1963

Published Monthly
1430 Tulane Avenue, New Orleans 12, La.

Complications of Drug Therapy In Hypertension*

• That the drugs used in antihypertensive therapy may have harmful effects on many organ-systems is brought out by the author.

JORGE I. MARTINEZ-LOPEZ, M. D.†
New Orleans

THE primary objective of antihypertensive therapy is to decrease morbidity and mortality by reducing the systemic blood pressure to normal or near normal limits. However, in our eagerness to attain this goal we often neglect to consider the fact that the patient may actually be harmed by these therapeutic agents. Some of the complications arising from the use of these drugs often threaten or terminate the patient's life; some result in irreversible damage, while others are reversible disappearing some time after cessation of therapy. Practically every organ system has been affected by the hypotensive drugs.

The basic mechanism of action responsible for these complications is not known in most instances but it is apparent that dosage of the drug and duration of therapy play an important role in their development.

A paper this brief can not comprehensively review the literature on this subject. Instead, I will point out some of the more important complications encountered.

Central Nervous System

Mental changes occur in about 15 to 25 per cent of hypertensives treated with Rauwolfia derivatives.[1] There may be lethargy, nightmares and Parkinson-type tremor. More frequently, however, there is a true depression often indistinguishable from the depressed phase of manic-depressive psychosis or involutional melancholia and may require intensive psychiatric therapy. On occasion, this depression may lead to suicidal attempts.

Psychiatric manifestations may appear as early as two weeks, and as late as fourteen months,[2] after therapy with Rauwolfia is begun. Although alterations in the mental status may arise "de novo", the incidence is highest in patients with a previous history of mental depression or depressive moods. In the latter group, therefore, it is preferable to avoid using Rauwolfia. In patients receiving Rauwolfia, use of the smallest effective dose will minimize the incidence of psychiatric complications.[1]

Withdrawal of Rauwolfia frequently results in disappearance of the induced mental changes, but it is worthwhile empha-

* Presented at the Eighty-second Annual Meeting of the Louisiana State Medical Society, May 9, 1962, Monroe.

† From the Department of Medicine, Louisiana State University School of Medicine, New Orleans, La.

sizing that it may take three to six months for them to clear up.

A syndrome manifested by anxiety, hallucinations, flapping tremor, hyperreflexia and/or convulsions can appear suddenly and without warning during the administration of mecamylamine.[3, 4] The combination of excessive intestinal absorption and poor renal excretion of the drug appears to be necessary to develop the syndrome.[4] Hence, in hypertensives who have advanced renal dysfunction, the drug must be administered with caution and discontinued when such symptoms appear.

Metabolic

The thiazide derivatives appear to be the commonest hypotensive agents bringing about derrangements in uric acid and carbohydrate metabolism.

Uric Acid Metabolism. Administration of the thiazides is frequently associated with hyperuricemia secondary to decreased renal tubular excretion of uric acid.[5] Hyperuricemia may remain asymptomatic in some patients, while in others acute gouty arthritis,[6, 7] renal colic due to formation of uric acid stones or evidence of nephrotoxicity may develop.[8]

In those individuals in whom gouty arthritis develops and in whom the thiazides need to be continued, zoxazolamine[9]† appears to be of therapeutic value in controlling the attacks. Conversely, probenecid is of doubtful value since its uricosuric effect appears to be inhibited by the thiazides.[6]

The administration of thiazide derivatives should be avoided in hypertensive patients with gout or a family history of gout.

Carbohydrate Metabolism. There is mounting evidence that the thiazides can adversely affect pre-existing diabetes mellitus or precipitate manifestations of the disorder in patients with latent diabetes or a diabetic predisposition. Although the mechanism by which hyperglycemia occurs or is further increased remains obscure, studies suggest that these agents are not true diabetogenic agents.[10]

The polyuria caused by the corresponding glycosuria is often erroneously attributed to the diuretic effect of the drug. Severe diabetic ketoacidosis may supervene before the true significance of the diuresis is comprehended.[11] Therefore, the hypertensive patient with diabetes mellitus or diabetic predisposition must be carefully supervised and periodically screened to prevent untoward effects when the thiazide derivatives are used. Though the hyperglycemic effect reverts to pretreatment levels soon after the drug is withdrawn, permanent aggravation of the diabetic state remains a possibility.

Fluid and Electrolyte Balance. The use of hypotensive agents, such as the thiazide derivatives, which also have a diuretic effect and promote excretion of the electrolytes sodium, potassium and chloride, may result in selective or combined deficiencies of these electrolytes and mild alkalosis. Patients whose intake of these electrolytes is poor seem to be more susceptible to develop these complications. In addition, the presence of co-existing renal dysfunction may be associated with impaired ability to conserve sodium, potassium and chloride.[12] In such patients administration of thiazide derivatives may aggravate the process of depletion.

Furthermore, the drug-induced hypokalemia may present an additional problem in patients requiring digitalis therapy often leading to manifestations of digitalis toxicity.

Occasionally the thiazide derivatives will be responsible for a marked decrease in the extracellular fluid volume and this may lead to a reduction in the cardiac output.

Anesthetic Hazards

The hypertensive patient receiving Rauwolfia derivatives or guanethidine poses a problem to the anesthesiologist and surgeon when the need for surgical procedures arises.[13, 14] The evidence suggests that these agents interfere with, and upset, the normal maintenance of circulatory

† Since the preparation of this paper, the drug has been withdrawn from the market.

homeostasis during anesthesia by reducing or depleting the intrinsic catecholamines. Such patients respond adversely to the effects of the anesthetics and to minimal losses of blood during surgery. The net result is a profound drop in blood pressure which sometimes may be difficult to combat. This drop in blood pressure presents a serious hazard to the patient with pre-existing coronary heart disease. Angina pectoris, acute myocardial infarction, acute pulmonary edema and even cerebral thrombosis have followed such hypotensive episodes. Similar peripheral vascular unresponsiveness has been observed following administration of the thiazides.

It is presently recommended that these hypotensive agents be discontinued at least two weeks pre-operatively in elective procedures to allow for repletion of the catecholamines and to restore myocardial and peripheral vascular responsiveness. It appears, however, that the thiazides can be continued safely up to twenty-four to thirty-six hours before surgery.[15]

When the situation calls for immediate surgical intervention the drugs must be discontinued and every precaution taken to prevent and actively combat this complication. This may necessitate replacement therapy with intravenous norepinephrine. If the catecholamines are partially depleted, intravenous ephedrine may restore the levels to normal. During surgery particular attention must be paid to the blood volume and cardiac status.

Gastrointestinal

Hypotensive agents may be responsible for producing colitis, paralytic ileus with or without obstruction, drug-induced hepatic injury, and severe hemorrhagic pancreatitis.

Chlorothiazide should be used cautiously in hypertensives with pre-existing liver disease as it has been incriminated in the precipitation of "ammoniogenic" hepatic coma[16, 17] within two to six days after its administration in this group of patients. Impending coma and hepatic coma have been seen more frequently in those individuals who have a brisk diuretic response to the drug. Although the mechanism responsible for inducing hepatic coma remains obscure, there are indications that it may be related to potassium deficiency and its accompanying extracellular alkalosis.[17] When supplemental potassium was given in thiazide-induced hepatic coma, clinical and electroencephalographic improvement was observed even though chlorothiazide was continued. In other instances, the concurrent oral administration of non-absorbable antibiotics to hypertensives with cirrhosis seems to have prevented this complication.[16]

Normal humans given oral reserpine showed significant elevation in free hydrochloric acid.[18] This action is probably mediated through selective stimulation of the parietal cells in the stomach. Clinically, chronic administration of Rauwolfia derivatives may be complicated by peptic ulcer with or without hemorrhage and perforation. Hence, no patient who gives a history suggesting past or present peptic ulcer should be given this agent. The patients receiving this drug should be screened periodically for this complication. In addition, the potential hyperacidity may be buffered with antacids or between-meal feedings but does not appear to be influenced by anticholinergic drugs.

Musculoskeletal

Approximately 7-10 per cent of patients receiving an average daily dose of 400 mgm. or more of hydralazine over prolonged periods of time develop a rheumatic syndrome.[19]

Initially these patients may present with migratory joint and muscle pains and later frank arthritis indistinguishable from rheumatoid arthritis. If the drug is continued, these manifestations may progress to a febrile syndrome associated with polyserositis, lymphadenopathy, photosensitivity and erythematous rashes, clinically resembling disseminated lupus erythematosus.

This complication subsides in the vast majority of cases within thirty-six to seventy-two hours after the drug is discontinued. However, in some cases the mani-

festations have persisted from three to seven years after the drug was withheld.[20]

Pulmonary

In 1954 Doniach and his co-workers[21] first described the development of respiratory distress and radiographic changes in the lungs in three patients receiving hexamethonium therapy for hypertension. Other reports which followed confirmed this observation. The syndrome is manifested clinically by gradual, or sudden appearance of progressive dyspnea which is relieved by lying flat. The characteristic pathologic findings consist of diffuse interstitial fibrosis and organized fibrin exudate in the alveoli and has been termed "fibrinous pneumonitis" by Perry and his associates.[22] In contrast to other complications, "fibrinous pneumonitis" appears to progress insidiously to asphyxia and death even when the drug is discontinued.

Initially it was felt that the disorder was observed only following the use of hexamethonium. However, a similar syndrome has been reported infrequently following the use of pentolinium[22] and most recently with mecamylamine.[23]

Related to Induced Hypotension

I have purposely avoided devoting much time to discuss complications arising secondary to reduction in systemic blood pressure. Two features, however, need emphasis.

First, it is important to realize that the ambulatory patient with essential hypertension has usually had the disease for some time. Therefore, it is undesirable to reduce the systemic blood pressure suddenly or profoundly. Instead, a gradual decrease to normal or near normal limits is preferable.

Lastly, pronounced reduction in systemic blood pressure in patients with severe renal, cardiac or cerebrovascular damage may lead to serious complications such as cerebrovascular insufficiency or thrombosis, cardiac arrhythmias, angina pectoris or myocardial infarction. A marked reduction in systemic blood pressure can also occur when hypotensive agents primarily excreted through the kidneys are given to patients who have severe renal disease.

Summary

1. Therapeutically induced reduction of the systemic blood pressure in hypertensives may lead to serious complications. These complications can be due to the normotensive effect itself, to side effects of the therapeutic agents or to inherent toxicity of the compound.

2. Complications of hypotensive therapy may be transient and reversible or permanent and irreversible, and often threaten or terminate the patient's life.

3. Awareness of the possible complications and contra-indications and continued supervision on the part of the physician are necessary for the successful management of the hypertensive patient.

Addendum

Two other communications which appeared since this manuscript was submitted for publication are worthy of mention.

Smilo et al (New Eng. J. Med. 267: 1225, 1962) conclusively demonstrated that probenecid and sulfinpyrazone are effective in preventing thiazide-induced hyperuricemia. Neither of these agents interferes with the diuretic action of thiazides. Runyan (New Eng. J. Med. 267: 541, 1962) was able to block the hyperglycemic effect of thiazides by administering acetyl salicylic acid (1.2 grams four times a day) simultaneously. No effect was noted on serum uric acid levels.

References

1. Achor, R. W. P.: Depressions in Hypertensive Patients. Heart Bull. 8:105, 1959.

2. Lemieux, G., Davignon, A. and Genest, J.: Depressive States During Rauwolfia Therapy for Arterial Hypertension. Canad. M.A.J. 74:522, 1956.

3. Schneckloth, R. E., Corcoran, A. C., Dustan, H. P. and Page, I. H.: Mecamylamine in Treatment of Hypertensive Disease. J.A.M.A. 162:868, 1956.

4. Perry, H. M., Jr., and Schroeder, H. A.: Neurological Manifestations of Antihypertensive Therapy with Mecamylamine. J.A.M.A. 164:1455, 1957.

5. Freeman, R. B. and Duncan, G. D.: Chlorothiazide-Induced Hyperuricemia. Metabolism 9:1107, 1960.

6. Aronoff, A.: Acute Gouty Arthritis Precipitated by Chlorothiazide. New England J. M. 262:767, 1960.

7. Warshaw, L. R.: Acute Attacks of Gout Precipitated by Chlorothiazide-Induced Diuresis. J.A.M.A. 172: 802, 1960.

8. Gelfand, M. L.: Renal Colic Associated with Chlorothiazide and Hydrochlorothiazide Therapy. New England J. Med. 265:129, 1961.

9. Connor, T. B., Carey, T. N., Davis, T. and Lovice, H.: Observations on the Uricosuric Effects of Zoxazolamine in Gout. J. Clin. Investigation 38:997, 1959.

10. Goldner, M. G., Zarowitz, H. and Akgun, S.: Hyperglycemia and Glycosuria Due to Thiazide Derivatives Administered in Diabetes Mellitus. New England J. Med. 262:403, 1960.

11. Hollis, W. C.: Aggravation of Diabetes Mellitus During Treatment with Chlorothiazide. J.A.M.A. 176: 947, 1961.

12. Friedman, I. S., Goldberg, M., Castleman, L. and Goldstein, J. D.: Chlorothiazide and Electrolyte Depletion in Chronic Glomerulonephritis.. A.M.A. Arch. Int. Med. 105:7, 1960.

13. Crandell, D. L.: The Anesthetic Hazards in Patients on Antihypertensive Therapy. J.A.M.A. 179:495, 1962.

14. Ziegler, C. H. and Lovette, J. B.: Operative Complications after Therapy with Reserpine and Reserpine Compounds. J.A.M.A. 176:916, 1961.

15. Minuck, M.: Reaction to Drugs During Surgery and Anesthesia. Canad. M.A.J. 82:1008, 1960.

16. Mackie, J. E., Stormont, J. M., Hollister, R. M. and Davidson, C. S.: Production of Impending Hepatic Coma by Chlorothiazide and its Prevention by Antibiotics. New England J. M. 259:1151, 1958.

17. Read, A. E.: Neuropsychiatric Complications Following Chlorothiazide Therapy in Patients with Hepatic Cirrhosis. Clin. Sci. 18:409, 1959.

18. Liebowitz, D. and Carbone, J. V.: Effect of Varying Doses of Reserpine on Gastric Secretion. New England J. M. 257:227, 1957.

19. Lansberry, J. and Rogers, F. B.: The Hydralazine Syndrome. Bull. on Rheum. Dis. 5:85, 1955.

20. Hildreth, E. A. and McCreary, T. A.: Persistence of the "Hydralazine Syndrome". J.A.M.A. 173:657, 1960.

21. Doniach, I., Morrison, B. and Steiner, R. E.: Lung Changes during Hexamethonium Therapy for Hypertension. Brit. Heart J. 16:101, 1954.

22. Perry, H. M., Jr., O'Neal, R. M. and Thomas, W. A.: Pulmonary Disease Following Chronic Chemical Ganglionic Blockade. Am. J. Med. 22:37, 1957.

23. Rokseth, R. and Storstein, O.: Pulmonary Complications During Mecamylamine Therapy. Acta Med. Scand. 167:23, 1960.

What Price Measles Vaccine?

Another advance in the conquest of one of the diseases that plague mankind has been recorded by Eli Lilly & Co. A test of a Lilly vaccine against measles has been made public at a medical meeting in Philadelphia. It established that the vaccine was remarkably effective in a measles epidemic in that city last May . . . Neither we nor the drug manufacturers themselves know what the price of the measles vaccine will be when it becomes available for general use. We know, however, that it can hardly reflect the true cost of the long experimentation and research which went into the product. Fortunately, Kefauver's sideshow committee hearings have as yet not deterred the drug manufacturers from their vital work. They continue in the vanguard of the fight against disease.—Editorial in Indianapolis (Ind.) **News**, March 22, 1962.

Recent Trends in the Management of Hypertension*

• The author gives a survey of recent trends in the management of hypertension towards accurate diagnosis as well as early and adequate therapy. The treatment may be surgical or medical with the use of antihypertensive drugs.

JOHN T. LECKERT, M. D.
New Orleans

THE modern trend in the management of hypertension is toward accurate diagnosis, as well as early and adequate therapy. One has only to reflect momentarily on the pathology[1] of hypertension to realize the importance of prompt treatment. Sustained diastolic hypertension results in cardiac hypertrophy, the early onset of arteriosclerosis and arteriolosclerosis. Hypertension and arteriosclerosis may result in cerebrovascular accidents. Arteriolosclerotic involvement of the kidneys (nephrosclerosis) may progress to uremia. Malignant nephrosclerosis may develop with resulting endarteritis and necrosis of the renal arterioles

Diagnosis

Page and Dustan[2, 3] have shown that careful antihypertensive therapy reduces the mortality, particularly among malignant hypertensives, and the morbidity, especially as regards heart and renal failure. It thus behooves us to study adequately all hypertensive patients, so that accurate determination of etiology may lead to adequate therapy. A diagnostic survey is indicated in any hypertensive patient under 60 years of age, or whenever there has been a rapid onset or progression of hypertension. This should include a complete history and physical examination, including ophthalmoscopic examination, palpation of the pulse and if indicated, the determination of the blood pressure in the lower extremities. A prostatic examination is indicated in male patients. Important laboratory studies include urinalysis, urine culture, blood urea nitrogen, blood sugar, PSP, and a serum potassium. A chest x-ray and electrocardiogram should be routine. If unilateral kidney disease[4-6] is suspected, intravenous pyelograms should be performed. These may be followed by retrograde pyelograms, isotope renograms, differential function studies and renal arteriography as indicated. If a pheochromocytoma[7] is suspected, a Regitine® and/or a histamine test should be done, and urinary and blood catecholamines should be determined. If primary hyperaldosteronism[8] is considered likely, the level of sodium-retaining corticoids in the urine should be obtained. If Cushing's syndrome[9, 10] is suspected, skull x-rays, as well as an ACTH stimulation and suppression test, are indicated. If such a diagnostic survey is undertaken, it is usually possible to classify hypertension as benign or malignant and essential or secondary.

Causes of Secondary Hypertension

The causes of secondary hypertension may be classified as congenital, inflammatory, vascular occlusive disease, endocrine and complications of pregnancy (Table 1). Coarctation of the aorta and hypogenesis of a kidney are the two congenital anomalies which result in hypertension.

There are five inflammatory conditions which cause hypertension. They are acute glomerulonephritis, chronic glomerulonephritis, chronic pyelonephritis, tubercu-

* Presented at the Eighty-second Annual Meeting of the Louisiana State Medical Society, Monroe, May 8, 1962.

From the Department of Medicine, Louisiana State University School of Medicine and Browne-McHardy Clinic, New Orleans, Louisiana.

TABLE 1
SECONDARY HYPERTENSION

Congenital	
	Coarctation of the aorta
	Hypogenesis of a kidney
Inflamatory	
	Acute glomerulonephritis
	Chronic glomerulonephritis
	Chronic pyelonephritis
	Tuberculous nephropathy
	Periarteritis nodosa
Vascular	
	Occlusive disease
	renal artery
	aorta obstructing renal ostia
Endocrine	
	Pheochromocytoma
	Cushing's syndrome
	Primary hyperaldosteronism
Complications of Pregnancy	
	Pre-eclampsia
	Eclampsia

lous nephropathy and periarteritis nodosa.

Hypertension may result from vascular occlusive disease of the renal artery or the aorta in the region of the renal ostia. There are three endocrine causes of secondary hypertension: pheochromocytoma, Cushing's syndrome and primary hyperaldosteronism. Hypertension also occurs as a complication of pregnancy in the form of pre-eclampsia or eclampsia.

Therapy

The management of secondary hypertension[9] resolves itself to the therapy of the causative disease. The longer, however, the hypertension has been present, the greater will be the resulting renal vascular changes and the residual elevation of the blood pressure after the definitive treatment of the underlying disease. Maxwell[4] states that most of his treatment failures occurred in known hypertension (or a sudden increased severity of established hypertension) for over one year. Ullman and associates[11] reported a surgical cure of a case of secondary hypertension of up to ten years' duration.

After all the secondary causes of hypertension are managed, the physician must treat the great majority of hypertensive patients medically. This should include psychotherapy, sedation, rest, occupational adjustment, weight reduction in obesity, as well as drug therapy. Salt restriction will increase the effectiveness of the latter. Antihypertensive therapy is contraindicated[12] in severe renal insufficiency, as well as in very far advanced vascular disease involving the coronary or cerebral arteries. Caution should be exercised in the therapy of diastolic hypertension in the presence of recent myocardial infarction, angina, myocardial ischemia, mild renal insufficiency and intermittent insufficiency of the carotid or basilar system, as well as in patients over 60 to 65 years of age. Ganglionic and postganglionic blocking agents are contraindicated in this group of patients. Ganglionic blocking agents should not be used in patients with bladder neck obstruction. Table 2 classifies hypertension according to its severity

TABLE 2
THERAPEUTIC CLASSIFICATION OF HYPERTENSION

Severity	Diastolic Pressure	Initial Drugs	Adjunctive Drugs
Mild	100-120, no complications	Rauwolfia drugs such as reserpine, syringoserpine, alseroxylon	Thiazide derivatives (chlorothiazide, hydrochlorothiazide, et al.)
Moderate	More than 120, no complications, 100-120 with complications	Thiazide and rauwolfia drugs	Guanethidine, hydralazine
Severe	More than 140, more than 120 with complications	Thiazide and rauwolfia drugs	Guanethidine, ganglionic blocking agents (pentolinium and mecamylamine) hydralazine, veratrum

and outlines the initial and adjunctive drugs of choice in the different categories. Two drugs still under study are not shown in this outline but will be discussed separately. In order to achieve the optimal antihypertensive response with the least side effects it is preferable to use combinations of drugs in small dosages.

Antihypertensive Drugs

Now let us consider the various antihypertensive drugs separately. Mebutamate[13] (Capla®) has a mild tranquilizing action and is closely related chemically to meprobamate. It is a centrally acting antihypertensive agent (Fig. 1) that normalizes the activity of the vasomotor center. The recommended dosage is one 300 mgm. tablet three to four times a day.

The rauwolfia alkaloids[14] (Fig. 1) have both central and peripheral mechanisms

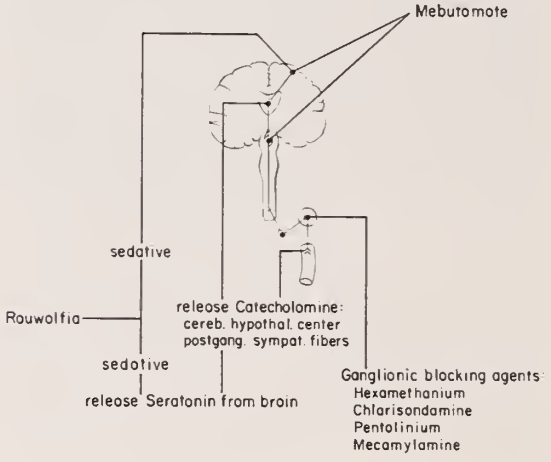


Figure 1

of action. They are mild sedatives. They deplete catecholamines from the hypothalamic centers, vasomotor centers and the postganglionic sympathetic nerve endings. A large variety of preparations are available for therapy. Whole root is used in dosage of 100 mgm. one to four times a day. Reserpine may be given, 0.25 mgm. one to four times a day. Syringoserpine (Singoserp®) is used in dosages of 1 mgm. one to three times a day. In order to lessen side effects, the smaller of these dosages is commonly used in combination with other antihypertensive agents. The most serious side effect (Table 3) is agitated depression. Lesser side effects include nasal congestion, drowsiness, muscle weakness, Parkinsonian-like effects, bra-

TABLE 3
UNDESIRABLE EFFECTS OF ANTIHYPERTENSIVE DRUGS

RAUWOLFIA (INCLUDING RESERPINE)
- nasal congestion
- drowsiness
- agitated depression
- muscle weakness
- Parkinsonism-like
- bradycardia
- antidiuretic effect
- increase in HCl in stomach

(only very large doses of syringoserpine have this effect)

HYDRALAZINE
- * headache
- faintness
- weakness
- rheumatoid-like arthritis (some have LE cells)
- tachycardia

VERATRUM
- * nausea
- vomiting
- vagimetric effect (bradycardia)

GANGLIONIC BLOCKING AGENTS
- * postural hypotension
- constipation
- paralytic ileus
- nasal congestion
- dry mouth
- urinary retention
- impotence
- interstitial pneumonia (hexamethonium)
- tremor
- mental symptoms (mecamylamine)
- convulsive seizure

GUANETHIDINE
- * postural hypotension
- effects last several days to a week
- diarrhea
- delay or inhibit ejaculation
- edema
- bradycardia

BRETYLIUM TOSYLATE
- * postural hypotension
- parotid pain
- develop tolerance
- inhibition of ejaculation

THIAZIDE DERIVATIVE
- * nausea
- weakness
- fatigue
- hypokalemia
- hypochloremia
- hyponatremia
- cardiac arrhythmias
- aggravation of { latent gout / latent diabetes
- thrombocytopenic purpura

dycardia, antidiuretic effects and excessive gastric hydrochloric acid. Syringoserpine is less prone to cause these effects.

The ganglionic blocking agents seem the most potent but probably are also the most dangerous of the antihypertensive drugs. Of these, hexamethonium and pentolinium[15] (Ansolysen®) simply compete with acetyl choline and thus block the transmission of impulses through the sympathetic ganglia. This results in reduction of total peripheral resistance. Mecamylamine (Inversine®), however, does not simply compete with acetyl choline. Rather, it rapidly diffuses into cells, and thus modifies the response of organs to this agent. The dosage of pentolinium is 20 to 40 mgm. two to five times a day. Mecamylamine is given in dosage of 2.5 to 5 mgm. two to five times daily. It is wise when using these drugs to have the patient keep the head of the bed elevated on blocks so as to keep the blood pressure normal while reclining. The undesirable effects of these agents include (Table 3) postural hypotension, constipation, paralytic ileus, nasal congestion, dry mouth, urinary retention and impotence. Interstitial pneumonia[16] has been reported with hexamethonium. Mecamylamine[15] has caused tremor, mental symptoms and convulsive seizures in patients who had severe vascular disease. In my experience danthron seems the most effective agent in preventing constipation.

Phentolamine[17] (Regitine®) blocks the action of norepinephrine released at the postganglionic sympathetic nerve endings (Fig. 2). Its main use, of course, is as a test for pheochromocytoma. It is also used to neutralize norepinephrine released in the histamine test or at the time of surgery for a pheochromocytoma.

Hydralazine[14] (Apresoline®) causes dilatation of constricted vascular muscle (Fig. 2), and in addition, depresses the outflow of sympathetic fibers from the hypothalmus and vasomotor center within the medulla. The usual dosage is 25 mgm. one to four times daily. Side effects (Fig. 3) include headache, faintness, weakness, tachycardia and rheumatoid-like arthritis. The latter may be associated with a positive test for LE cells.

The veratrum alkaloids[14] (Fig. 2) were among the first antihypertensive drugs,

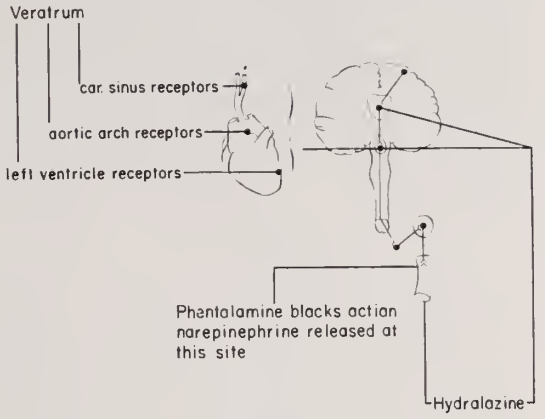


Figure 2

but because of the low margin between the therapeutic and toxic doses, they have lost their popularity. They stimulate the carotid sinus, aortic depressor and left ventricular receptors causing reflex depression of the vasomotor center. Alkavervir (Veriloid®) may be used in dosages of 1 to 2 mgm. two to four times a day. Protoveratrine A (Protalba-R®) may be given in doses of 0.2 mgm. two to four times a day. Overdosage of these drugs (Table 3) results in nausea, vomiting and bradycardia.

The thiazides cause an increased excretion of sodium, potassium and water. Their antihypertensive effect[14] was originally attributed to a reduction in plasma volume and the resulting reduction in cardiac output. With chronic administration, however, the blood volume is restored and thus, it is now believed that the antihypertensive effects of these agents is related to the electrolyte changes which are induced at the local arteriolar level. The thiazides are particularly useful in enhancing the response to other antihypertensives. At their respective dosages the various thiazides seem to be about equally effective. Chlorothiazide may be used in dosages of 500 mgm. once or twice a day. Hydrochlorothiazide may be given in dosages up to 50 mgm. twice daily. The latter seems particularly useful in combination

with syringoserpine. The side effects (Table 3) of the thiazides include nausea, weakness, fatigue, hypokalemia, hypochloremia, hyponatremia, cardiac arrhythmias, aggravation of latent gout or diabetes, and very rarely, thrombocytopenic purpura. Further elevation of the blood urea nitrogen has been noted in renal failure. Supplemental potassium therapy may be necessary.

Guanethidine [18, 19] (Ismelin®) (Fig. 3)

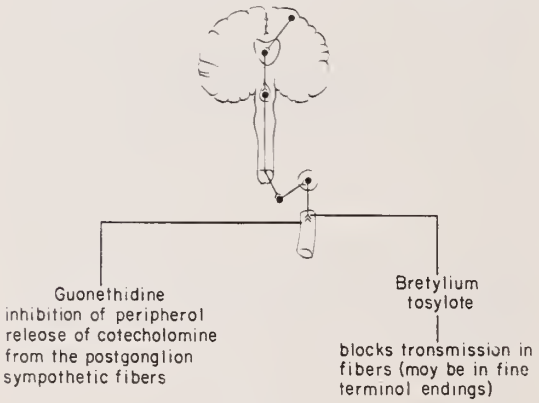


Figure 3

inhibits the peripheral release of catecholamines from the postganglionic sympathetic fibers. It may be used in dosages of 10 to 50 mgm. once or twice a day. Its side effects include postural hypotension, diarrhea, edema, bradycardia and delay or inhibition of ejaculation. Bretylium tosylate[20-22] (Fig. 3) is another postganglionic blocking agent; it blocks the transmission of nerve impulses in the postganglionic fibers or the fine terminal endings. The development of tolerance seems to be the main deterrent of its being effective as an antihypertensive drug. Side effects include postural hypotension, parotid pain and inhibition of ejaculation.

The monamine oxidase inhibitors[23] act on the enzyme that catalyzes the break down of serotonin, norepinephrine, and epinephrine. It appears thus paradoxical that hypotension should result. Recent studies, however, have shown that ganglionic transmission is greatly diminished by increasing the ganglionic content of norepinephrine. They thus act as ganglionic blocking agents causing postural hypotension. It is also possible that with MAO inhibitors the increased norepinephrine level in the blood vessels results in a decreased sensitivity of the whole vascular system to norepinephrine. Of course, these drugs are primarily used in the treatment of mental depression, but they are effective antihypertensive agents.

Alpha-methyl-dopa is a decarboxylase inhibitor[24, 25] (Fig. 4). It depresses the

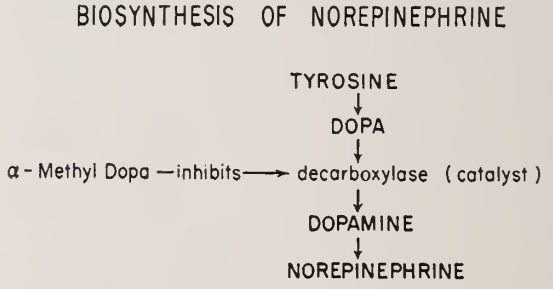


Figure 4

conversion of dopa to dopamine and thus decreases the production of norepinephrine. The original studies were done on the DL form of alpha-methyl-dopa and were discontinued because of the high incidence of side effects which consisted of agitated depression, drug fever and elevation of the serum alkaline phosphatase, serum transaminase and bilirubin. In contrast, the L-isomer (Aldomet) has produced surprisingly few side effects.* Mild drowsiness may occur at the initiation of therapy; one case of nausea and two cases of diarrhea have been reported. The latter were easily controlled with antispasmodics. L-alpha-methyl-dopa (Aldomet) is

* Studies subsequent to submission of this paper for publication have shown certain precautions that should be followed in therapy with methyl dopa (Aldomet®). Since a rare case of reversible leukopenia and granulocytopenia have been seen, the white blood count should be watched, especially if fever occurs.

Fever has been rarely noted during the first two weeks of treatment. This sometimes has been associated with reversible abnormalities of the alkaline phosphatase, transaminase and bromsulphalein. For this reason, liver function studies should be checked periodically during the first six to eight weeks of therapy or if an unexplained fever occurs. So far all four abnormalities have reverted to normal with discontinuance of the drug. This drug is not recommended for use during pregnancy at this time.

effective against all degrees of hypertension, frequently lowering recumbent, as well as standing, blood pressure. Its antihypertensive effect may be unrelated to its biochemical properties. It has been postulated that it causes the depletion of norepinephrine in the brain or sympathetic nerves or both. Thus, it may act by producing sympathetic blockage at a central or peripheral site. The dosage of Aldomet varies from 250 to 500 mgm. two to four times a day. Its effectiveness has been established in studies of 52 patients by Gillespie and associates,[24] as well as 33 patients treated by Cannon and associates.[25] The latter report that severely uremic or malignant hypertensive patients may be quite sensitive to the drug. Furthermore their sensitivity seems to increase as renal failure advances. They have also found it effective in the management of hypertensive emergencies.

Des-sulfamyl benzothiadiazine (SRG 95213) is a new thiazide derivative synthesized by Schering scientists. Figure 5

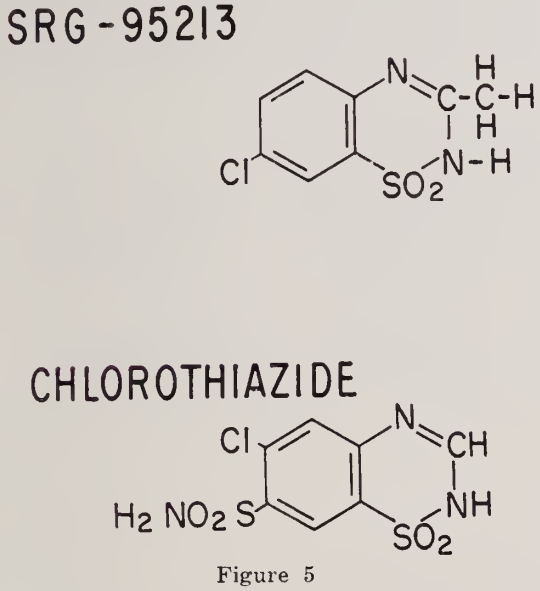


Figure 5

shows its structural formula as compared to chlorothiazide. Studies by Rubin and associates[26-28] show that it is more potent than the other thiazides in inhibiting norepinephrine and angiotensin-induced contractions of rabbit aortic strip preparations. Similarly, intravenous studies in anesthetized dogs and cats have demonstrated that it depresses reactivity of the peripheral vasculature to a variety of constrictor agents. The prolonged hypotension produced by this agent results from a direct action on arteriolar smooth muscle. SRG is not a diuretic and at high doses it has an antidiuretic effect which appears to result from a direct tubular action rather than associated with hemodynamic changes. At the present time SRG 95213 is undergoing careful clinical study.

Hazards in Surgery

Let us now turn to the hazard that may result if hypertensive patients are to undergo surgery.[17] These antihypertensive drugs interfere with the hemodynamic adjustments and can cause profound cardiovascular collapse when a patient is subjected to the stress of anesthesia and surgery. The action of most of the antihypertensive agents is directed primarily at interference with the functioning of the sympathetic nervous system. As outlined above, this is accomplished at a number of levels.

The preservation of circulatory homeostasis during anesthesia is wholly dependent upon the responsiveness of the myocardium and the peripheral vasculature to the circulating intrinsic catecholamines and upon the competence of the cardiovascular reflexes. The depressant action on the cardiovascular system of anesthetic agents is to a large extent antagonized by the reflex release of epinephrine and norepinephrine if homeostatic mechanisms are intact. Vascular reactivity may also be interfered with by preanesthetic medication, hypoventilation, electrolyte imbalance and hormonal insufficiency. The majority of antihypertensive agents have a short duration of action and can usually be discontinued in adequate time prior to anesthesia. This is not true, however, for the thiazides, the rauwolfia compounds, guanethidine and the MAO inhibitors.

The thiazides antihypertensive effect seems to last about four days. They also may produce hypokalemia, hypochloremia and hyponatremia. Guanethidine causes an inactivation of the peripheral sympa-

thetic nervous system which persists for five to seven days. Although rauwolfia compounds may disappear rapidly from the body, the depleted catecholamine stores are gradually replenished over a ten to fourteen day period.

If elective surgery is contemplated, antihypertensive therapy should be discontinued at an appropriate time prior to surgery in order to re-establish the competence of circulatory homeostasis. If emergency surgery is necessary, the anesthesiologist should be informed of the antihypertensive drugs used so that he can choose the anesthetic agents that will not tend to hinder vascular reactivity. Norepinephrine (Levophed®) or a suitable substitute should be readily available.

Emergencies

The last subject relative to hypertensive therapy which should be considered is hypertensive emergencies.

There are five so-called hypertensive emergencies[14] which require immediate parenteral therapy. They are severe pre-eclampsia (or eclampsia), hypertensive encephalopathy, severe hypertension in acute glomerulonephritis and severe hypertension complicating acute heart failure or cerebral hemorrhage. Their treatment, of course, must be carefully monitored and individualized. Some of the recommended schedules of emergency treatment are outlined below. (Table 4)

If a ganglionic blocking agent is used the head of the bed should be elevated on blocks. Do not try to cause a rapid or profound pressure drop in any patient with significant arteriosclerosis.

Summary

The recent trend in the management of hypertension is toward accurate diagnosis and early adequate therapy. Before treatment the patient should be carefully studied to determine if secondary hypertension exists so that the primary disease may be treated before renal vascular changes result. The medical treatment of hypertension should include psychotherapy, rest, occupational adjustment, and antihypertensive drugs. Antihypertensive therapy is contraindicated in severe renal insufficiency, as well as very far advanced vascular disease involving the coronary or cere-

TABLE 4
HYPERTENSIVE EMERGENCIES

Emergency	Initial Therapy	Route	Frequency	Adjunctive Therapy
Encephalopathy and cerebral hemorrhage	Reserpine 2.5-10 mgm.	IM	2-12 hours	Pentolinium Inf., mecamylamine IM, alkavervir IM or Inf.
Acute heart failure	Pentolinium 5-50 mgm.	IM	½-8 hours	Reserpine IM, alkavervir IM or Inf.
	50-200 mgm. in 1000 cc. 5% dextrose in distilled water	Inf.		
	Mecamylamine 3-50 mgm.	IM	2 hours	
Pre-eclampsia, eclampsia and acute glomerulonephritis	Hydralazine	IV or IM then Inf.	Initial 5-20 mgm. in 5 minutes Initial 10-25 mgm. 25-50 mgm. in 1000 cc. 10% dextrose in distilled water	Reserpine IM

bral arteries. In order to achieve the optimal antihypertensive response with the least side effects it is preferable to use combinations of drugs in small dosages. A classification and outline of antihypertensive therapy has been presented. The various antihypertensive agents have been described. The hazard of surgery in patients under antihypertensive therapy has been reviewed. The therapy of the hypertensive emergencies has been outlined.

References

1. Block, J. B. and Burrows, B. A.: Diagnostic use of I^{131} diodrast in hypertension due to unilateral renal disease, Circulation 18:696 (October) 1958.

2. Page, I. H. and Dustan, H. P.: Persistence of normal blood pressure after discontinuing treatment in hypertensive patients, Circulation 25:433 (March) 1962.

3. Dustan, H. P., Schneckloth, R. E., Corcoran, A. C. and Page, I. H.: The effectiveness of long-term treatment of malignant hypertension, Circulation 18:644 (October) 1958.

4. Maxwell, M. H.: Reversible renal hypertension. Clinical characteristics and predictive tests, Amer. J. Cardiol. 9:126 (January) 1962.

5. Hunt, J. C. and others: Clinical evaluation of hypertensive patients. Indications for utilization of the isotope renogram, separated renal function. Amer. J. Cardiol. 9:134 (January) 1962.

6. Morris, G. C., Jr. and DeBakey, M. E.: Renovascular hypertension. Experience with renal artery reconstruction in 115 patients, Amer. J. Cardiol. 9:141 (January) 1962.

7. Johns, V. J., Jr. and Brunjes, S.: Pheochromocytoma, Amer. J. Cardiol. 9:120 (January) 1962.

8. Conn, J. W.: Primary aldosteronism, a new clinical syndrome, J. Lab. Clin. Med. 45:6, 1955.

9. Grob, D.: Diagnosis and management of the curable forms of hypertension, Advanc. Intern. Med. 10:219, 1960.

10. Horwith, M. and Stokes, P. E.: Cushing's syndrome; experience with total adrenalectomy, Advanc. Intern. Med. 10:259, 1960.

11. Ullman, T. D., Shapiro, T., Barzilay, B. and Schwartz, A.: Vascular abnormalities in a well functioning kidney as the cause of long-standing severe juvenile hypertension, cured by unilateral nephrectomy, Amer. J. Med. 26:960 (June) 1959.

12. Fairhairn, J. F., II: Selection of hypertensive patients for drug treatment, Proc. Mayo Clin. 33:307 (June) 1958.

13. Berger, F. M. and Margolin, S.: A centrally acting blood pressure lowering agent (W-583), Fed. Proc. 20:113 (March) 1961.

14. Brest, A. N. and Moyer, J. H.: Current status of drug therapy and choice of drugs in the treatment of hypertension, Progr. Cardiov. Dis. 3:350, 1961.

15. Edwards, J. C.: Management of Hypertensive Disease, St. Louis, The C. V. Mosby Company, 1960, 439 p.

16. Petersen, A. G., Dodge, M. and Helwig, F. C.: Pulmonary changes associated with hexamethonium therapy, A.M.A. Arch. Intern. Med. 103:285 (February) 1959.

17. Crandell, D. L.: The anesthetic hazards in patients on antihypertensive therapy, J.A.M.A. 179:495 (February 17) 1962.

18. Richardson, D. W., Wyso, E. M., Magee, J. H. and Cavell, G. C.: Circulatory effects of guanethidine (Clinical, renal, and cardiac responses to treatment with a novel antihypertensive drug), Circulation 22:184-90 (August) 1960.

19. Page, I. H., Hurley, R. E. and Dunstan, H. P.: The prolonged treatment of hypertension with guanethidine, J.A.M.A. 175:543 (February 18) 1961.

20. Freis, E D., Sugiora, T. and Liptak, D.: Selective inhibitiou of the sympathetic nervous system in man with bretylium tosylate, a new antihypertensive agent, Circulation 22:191 (August) 1960.

21. Soloff, L. A., Reidenberg, M., Winters, W. L., Jr. and Bello, C. T.: Clinical experiences with bretylium tosylate, Ann. N. Y. Acad. Sci. 88:1003 (October 11) 1960.

22. Conway, J: Clinical pharmacology of bretylium tosylate: preliminary observations, Ann. N. Y. Acad. Sci. 88:956 (October 11) 1960.

23. Bindeu, G.: The antihypertensive effect of the monamine oxidase inhibitors—mechanism of action. In: Brest, A. N. and Moyer, J. H., ed., Hypertension, Recent Advances, The Second Hahnemann Symposium on Hypertensive Disease, Philadelphia, Lea & Fehiger, 1961.

24. Gillespie, L. J., Oates, J. A., Crout, J. R. and Sjoerdsma, A.: Clinical and chemical studies with alpha-methyl-dopa in patients with hypertension, Circulation 25:281-91 (February) 1962.

25. Cannon, P. J., Whitlock, R. T., Morris, R. C., Angers, M. and Laragh, J. H.: Effect of alpha-methyldopa in severe and malignant hypertension, J.A.M.A. 179:673 (March 3) 1962.

26. Ruhin, A. A. et al.: A non-diuretic benzothiadiazine with antihypertensive properties, presented at Pharmacology Society Meeting in Rochester (August) 1961.

27. Roth, F. E. et al.: Pharmacology of 3-methyl-7-chloro-1, 2, 4-benzothiadiazine-1, 1-dioxide (SRG 95213), a non-diuretic antihypertensive agent, presented at Pharmacology Society Meeting in Rochester (August) 1961.

28. Taylor, R. M.: Renal pharmacology of an antihypertensive des-sulfamyl benzothiadiazine, presented at Pharmacology Society Meeting in Rochester (August) 1961.

Perils of Mail Order Pharmacies

Doctors should urge their patients to think twice before succumbing to the temptations of mail-order economy in the area of ethical pharmaceuticals. The delays inherent in mail-ordering as well as the uncertainty as to what is delivered—and when—should convince the reasonable patient that he is ahead by having his prescription filled by his regular local druggist.—Editorial in **Wisconsin Medical Journal,** March 1962.

Clinical Experiences With Renal Hypertension

• A study of 54 patients with renal hypertension.

J. L. BOUDREAUX, M. D.*
Lafayette

H. M. RADWIN, M. D.**
P. D. DIGGDON, M. D.**
J. U. SCHLEGEL, M. D.
New Orleans

HYPERTENSION due to unilateral renal disease yields a good cure rate and prognosis only if discovered and adequately treated in its early stages. It has been shown that a kidney which causes hypertension usually excretes urine which differs in composition and volume from that produced by its contralateral mate.[1] Radioactive renograms, intravenous urography and renal angiography may or may not reveal pathology even if present.[2, 3]

The diagnosis of renal hypertension is not always easy to make and it appears that utilization of many appropriate diagnostic tools is indicated. The frequency of renal hypertension amenable to surgical cure is not established, although several publications on this topic have appeared.[1, 2, 4] In an attempt to further evaluate this problem, a number of hypertensive patients were studied during the last two years.

Method

Fifty-four patients were studied. Absence of uremia and elevation of the diastolic blood pressure above 90 mm. Hg. were the only criteria for study. One of the patients was referred for differential kidney function studies with aortogram evidence of a left renal vascular stenosis.† The average age for the group was thirty-seven years; however, there were several younger patients whose ages were eleven, sixteen and nineteen. Twenty-two patients (40 per cent) were Caucasian and thirty-one (60 per cent) were Negro. There were forty-two males (79 per cent) and twelve females (21 per cent).

The technique which we followed in studying renal hypertension consisted of a thorough hypertensive as well as urological history and physical examination. Blood urea nitrogen level, total phenolsulfonphthalein determination, urinalysis and urine culture were obtained routinely on all patients.

A Radio-Hippuran renogram,[2] was obtained prior to the intravenous urogram.

The patient was then subjected to renal function studies using the method reported by Schlegel, Savlov, and Gabor[3] and continued by McDonald.[4] The renal angiogram was always performed last. The translumbar method as described by Poutasse and Dunstan[5] was employed.

Eight patients (14.8 per cent) were subjected to surgical exploration through a midline abdominal incision and multiple bilateral renal biopsies were obtained.

Results

Unilateral renal vascular disease was diagnosed (Group A, table 2) in nine pa-

From the Department of Surgery, Division of Urology, Tulane University School of Medicine, and Urological Services, Charity Hospital of Louisiana at New Orleans and Veterans Administration Hospital of New Orleans, Louisiana.

This research was supported in part by U. S. Public Health Service Grant number H-4659.

* Current address: 107 West Beverly Drive, Lafayette, Louisiana.

** Fellow under U. S. Public Health Service Grant number CRT-5057.

† Recognition is given to Louisiana State University Urology service at Charity Hospital, New Orleans, Louisiana for permitting us to study this patient.

TABLE 1
UNILATERAL RENAL VASCULAR DISEASE

Patient	IVP	Differentials	Aortogram	Urine Culture
R.H.	—	+	+	—
L.W.	—	+	+	—
I.W.	—	+	—	—
J.S.	—	+	—	—
R.V.	—	+	—	—
L.B.	—	+	+	—
W.T.	+	+	+	—
L.H.	—	+	—	—
O.G.	—	+	+	—

tients (16.6 per cent) of those studied. Only one of these patients accepted surgery which confirmed the diagnosis. He was a nineteen year old Caucasian admitted with a known history of hypertension of five months' duration. Admission blood pressure was 280/180. Studies revealed a normal urogram, differential function studies typical of a left vascular lesion, narrowing of the left renal artery with post-stenotic dilatation and decreased cortical vascularization apparent on aortogram. Surgery consisted of arteriotomy over the stenotic area in the main renal artery with insertion of a Dacron patch graft. Postoperatively, his blood pressure returned to normal, 144/88, and was still normal, 140/90, one year later.

The remaining 8 patients refused surgical correction of their diagnosed renal hypertension, thereby leaving the diagnosis unconfirmed. The evidence for renovascular hypertension in these latter eight patients was based upon positive differential function studies in all and positive aortogram findings in four (Table 1). Urinalysis and urine culture were negative in all 9 cases. The average age of these patients was thirty-eight years.

Seven patients (12.9 per cent, Group B, Table 2) were noted to have normal differential function studies, urograms, and urine culture. No cause for their hypertension could be found.

Twenty-eight patients (51.8 per cent) were diagnosed as chronic bilateral pyelonephritis with associated hypertension (Group C, Table 2). This diagnosis was based upon either positive urine culture, clinical history or histological evidence. Seventeen of these patients had positive urine cultures obtained from the renal pelvis and a history of clinical pyelonephritis in the past. Twenty patients of this group were Negro and 22 were male. The average age was thirty-eight years, although the youngest was age eleven years. The differential renal function studies were significant in that twenty patients (71 per cent) had definite bilateral, but identical decrease in function. Six patients showed a predominant decrease in one kidney's function, but also had evidence of bilateral disease. Only 2 patients had near normal function, bilaterally. However, they had infected pelvic urine.

Four patients in the group classified as chronic pyelonephritis were subjected to surgical exploration due to the severity of the hypertension, the uncertainty of the diagnosis, and their youth. An eleven year old Negro female with a clinical history of recurrent pyelonephritis since age three, underwent left heminephrectomy and later complete left nephrectomy in at-

TABLE 2
HYPERTENSIVE STUDIES ON 54 PATIENTS

Group	Disease	No.	and %	Av. Age	White	Negro	Male	Female
A	Unilateral Vascular Renal Disease	9	16.6	38	6	3	7	2
B	No Renal Disease	7	12.9	35	3	3	4	2
C	Chronic Bilateral Pyelonephritis	28	51.8	38	8	20	22	6
D	Bilateral Renal Disease (other than pyelonephritis)	10	18.7	37	5	5	9	2
	TOTAL	54	100	37	22	31	42	12

tempts to cure her progressive hypertension. The only demonstrable pathology was atrophic tubules. No histological evidence of pyelonephritis was noted. Postoperatively, her blood pressure has returned to normal and remained so until now, a year later. Her differential studies, although not completely accurate due to leakage, did point toward damage to the minor vessels of the left kidney as also seen on the aortogram. The remaining 3 patients explored showed biopsy evidence of chronic pyelonephritis as well as arteriosclerosis and arteriolar nephrosclerosis. They were neither improved nor adversely affected by their surgery. One, however, died with malignant hypertension five months postoperatively from a coronary occlusion and the other 2 required considerable antihypertensive medication. Two had negative urine culture, yet open renal biopsy demonstrated considerable chronic pyelonephritis. In one of these patients, omentum was tacked to her right kidney in an attempt to increase renal blood flow with no beneficial effect noted one year later.

Ten patients (18.7 per cent, Group D, Table 2) were classified as having bilateral renal disease, other than pyelonephritis. Some of these patients may well have had chronic pyelonephritis, but this was neither suggested by history nor proven by biopsy or bacteriuria. In 8 patients, the diagnosis was made on the basis of bilateral decrease in renal function without evidence of pyelonephritis and in 2 with normal differential function studies, on the basis of open renal biopsies. A right nephrectomy was performed on a sixteen year old Negro boy with blood pressure readings of 230/150. The differential function studies indicated decreased function bilaterally, but the aortogram gave the appearance of a decrease in vascularization to the lower pole of the right kidney. Bilateral biopsies at the time of exploration revealed benign nephrosclerosis. Blood pressure determinations in the aorta and both renal arteries indicated no pressure gradient. However, an obstruction in one of the needle puncture sites resulted in an extensive infarct of the right kidney, necessitating nephrectomy. Postoperatively, his blood pressure decreased to 160/110 where it has remained with the aid of antihypertensive medications for two years.

The second patient was explored in the face of normal differential function studies to remove a renal calculus and obtain renal biopsies. His aortogram revealed an aberrant renal artery to the lower pole of the right kidney causing relative ureteropelvic junction obstruction. Biopsy revealed bilateral microscopic nephrocalcinosis. All tests for parathyroid adenoma were negative. Postoperatively, his blood pressure came down somewhat, but shortly thereafter increased to moderately severe hypertensive levels. Antihypertensive medications are being employed in an effort to control his hypertension.

Discussion

Of the 54 patients studied, only 7 (12.9 per cent) had no demonstrable renal pathology. Nine (16.6 per cent) were diagnosed as unilateral renal vascular hypertension and of these only 1 submitted to surgery, confirming the diagnosis. The methods and procedures used in this study were previously published by one of the authors (JUS) and are the same as used in a similar study by McDonald, et al. Their results were quite different as unilateral renal vascular hypertension was diagnosed in 43 per cent of the 97 cases studied. Due to the similarity in the technical aspect of the two studies, it seems reasonable to suggest that difference in patient material resulted in the differences in the yield of renal vascular hypertension.

It was surprising to find that over 50 per cent of the hypertensive patients studied had pyelonephritis. Even more surprising was the finding that the majority of these were young Negro males without other demonstrable urinary tract pathology. Since it appears well documented that pyelonephritis below the age of thirty is far more frequent in the female, one wonders if pyelonephritis in the

young male is more often associated with hypertension than is the case in the female. The correlation of pyelonephritis and hypertension as demonstrated in numerous investigations and again in this study makes one wonder whether the pyelonephritis preceded the hypertension or vice versa. Since in most cases arteriography revealed normal major renal vessels, it appears unlikely that the sequence of events in these patients was renal hypertension with superimposed pyelonephritis, rather than the other way around.

In none of the patients with normal differential kidney function studies who were subjected to surgical exploration was any evidence of unilateral renal vascular disease found. The intravenous urogram in this series did not aid appreciably in establishing a renal etiology of the hypertension. Seventy-one per cent of the cases studied had normal urograms. The remaining 29 per cent showed varying stages of pyelonephritis, lithiasis or minor calyceal changes. Only in 4 instances did the intravenous urogram reveal a contracted kidney or difference in renal size.

Urinalysis and urine culture were of considerable help. Sixty-five per cent of those diagnosed as chronic pyelonephritis had positive urine cultures.

The Radio-Hippuran renogram was of more help in evaluating ureteral edema with obstruction after differential function studies than in arriving at the diagnosis of renal hypertension. Prevention of complications from the split function studies was apparent, using urea intravenously for three consecutive days.[6]

Although our yield of renal vascular hypertension was disappointingly low, it appears that the incorporation of several diagnostic procedures is well worth while and necessary, especially in the young hypertensive. Of the large number of patients (87 per cent) in whom renal pathology as possible etiology for hypertension existed, 72.2 per cent had pathology of a nature that is not at this point amenable to surgical therapy. It appears that we must improve our methods of prevention of chronic renal disease.

References

1. Connor, A. B., Thomas, Jr., W. C., Haddock, L. and Howard, J. E.: Unilateral Renal Disease as a Cause of Hypertension: Its Detection by Ureteral Catheterization Studies. Ann. Int. Med., 52:544, 1960.

2. Winter, C. C.: Unilateral Renal Disease and Hypertension: Use of the Radioactive Renogram as a Screening Test. J. Urol., 78:107, 1957.

3. Schlegel, J. U., Savlov, E. and Gabor, F.: Studies in Renal Hypertension. J. Urol., 81:581, 1959.

4. McDonald, D. F.: Individual Renal Clearance in Diagnosis of Hypertension of Renal Origin. J. Urol., 86:292, 1961.

5. Poutasse, E. F. and Dunstan, H. P.: Arteriosclerosis and Renal Hypertension. J.A.M.A., 165:1521, 1957.

6. Cohen, A. D., Boudreaux, J. L. and Schlegel, J. U.: Ureteral Obstruction Following Retrograde Catheterization. J. Urol. 87:662, 1962.

A Tragic Step Backward for Medicine

The manufacturers say that the provisions of S. 1552 (Kefauver Bill) if enacted would inevitably curtail their research and development of new products, and the availability of such products for use by practising physicians. If this occurred, it would be a tragic step backward for medical health. Regulation may be necessary but it should not endanger basic well springs of activity. The pharmaceutical industry has much to offer and it would indeed be a grievous thing if they were prevented from making this contribution.—Nathan S. Kline, M. D., Director of Research, Department of Mental Hygiene, State of New York, to Senate Subcommittee on Antitrust and Monopoly.

Two-Hour Oral Cholecystography

• A study of 244 patients was conducted to see if the gallbladder could be satisfactorily visualized two hours after ingestion of the contrast medium with the results excellent or satisfactory in 35.6 per cent.

CHARLES M. NICE, JR., M. D., Ph. D.
RAMON A. MOUTON, M. D.
MANUEL ROY, M. D.
New Orleans

ALTHOUGH the twelve hour gall bladder roentgen examination lends itself readily to hospital and office routine, occasionally it is desirable to have a more rapid evaluation of the gallbladder. This is especially so in acutely ill patients. Intravenous injection of Cholegrafin is usually employed at the present time when a more rapid examination is required. It would seem advantageous if a rapid oral method could be employed especially in the case of aged patients with cardiovascular disease.

Two of the principal factors in determining the time necessary to perform oral cholecystography include emptying of the stomach and absorption of the contrast agent from the small intestine. Under ordinary conditions it usually takes about six hours to obtain maximum opacity of the gallbladder and for this reason the commonly employed twelve hour technique is used, in which the patient takes the contrast medium orally before retiring the night previous to examination.

One morning a patient presented for fluoroscopy and spot films of the gallbladder; during fluoroscopy it was noted that the contrast material was in the antrum of the stomach. Since the stomach did not appear dilated and there was no obvious fluid retention it did not seem that outlet obstruction of the stomach was present. It was postulated that either the patient took the contrast material at the wrong time or was lying in a supine position after taking the contrast material so that it remained for a long time in the fundus of the stomach. Therefore, it was decided to have the patient drink a glass of water and lie in the right lateral recumbent position to enhance emptying of the stomach. Hourly roentgenograms of the right upper quadrant revealed a diagnostic opacification of the gallbladder in two hours. Following this, we decided to determine whether various oral cholecystographic agents could be used to evaluate the gallbladder in a short period of time.

Material and Methods

A series of 244 ward patients were used for the study. No process of selection was used and as far as possible consecutive cases were taken. Four recently developed contrast agents were evaluated. These included Bilopaque,† Oragrafin calcium, Oragrafin sodium,‡ and Orabilex.§

Bilopaque is 2-(3-acetamido-2, 4, 6-triiodobenzyl) butanoic acid. It is given orally in a dose of six tablets (3 grams). Oragrafin calcium is a calcium salt of Beta-(3-dimethylamino-methylenamino-2, 4, 6-triiodophenyl)-propionic acid. This has been used in Europe under the name of Solu-Biloptin. It is dispensed in packets which contain 3 grams of the contrast material dispersed in sucrose. This may be mixed with water or fruit juice before oral ingestion. Oragrafin sodium is a sodi-

From the Department of Radiology, Tulane University School of Medicine and the Department of Diagnostic Radiology, Charity Hospital, New Orleans, La.

† Supplied by Winthrop Laboratories, New York, New York.

‡ Supplied by Squibb Laboratories, New York, New York.

§ E. Fougera & Co., Inc., Hicksville, New York.

um salt of the same chemical compound and is dispensed in capsules containing 0.5 grams, the single dose being 3 grams. The compound is known in Europe as Biloptin. Orabilex is 3-(3-butyrylamino-2, 4, 6-triiodophenyl)-2 ethyl sodium acrylate. It is dispensed in capsules of 0.75 grams each, the total dosage being 4.5 grams.

In this study the fasting patient arrived in the Department of Diagnostic Radiology at 6:00 A.M. at which time one of the four contrast materials with a glass of water was given with instructions to lie in the right lateral recumbent position for a period of two hours. Approximately one hour after ingestion of the contrast medium the patient was given another glass of water in order to continue to stimulate the emptying of the stomach and possibly to aid in absorption of the contrast medium from the small intestine. A roentgenogram of the gallbladder was taken after two hours. In case the demonstration of the gallbladder was not satisfactory further follow-up films were also taken. The opacification was classified as excellent, good, fair, poor or nonvisualization.

Results

As indicated in Table 1, there was excellent or good opacification of the gallbladder within two hours in 25 to 40 per cent of the patients in the various groups with an overall percentage of 35.6 (Fig. 1). On the other hand, 40.9 per cent of the total number of patients were not visualized at the time of the two hour examination. Bergeron[1] reported 543 patients from Charity Hospital in 1960, comparing Orabilex, Telepaque, and "Compound X" in the routine twelve-hour examination. For comparison these figures are placed in the Table and it is readily noted that 59.1 per cent of the patients showed excellent or good visualization and only 25 per cent were not visualized. This gives a general idea of the material as seen at Charity Hospital.



Figure 1—Opacification of gallbladder two hours after Oragrafin calcium taken orally.

It was feared that if a rapid emptying of the stomach were encouraged there might be a slight increase in the number of side effects. For this reason the side effects in the patients of this series are tabulated in Table 2. A few patients had moderate nausea or cramps and less than 2 per cent of the entire series actually had

TABLE 1
TWO HOUR GALLBLADDER VISUALIZATION AT CHARITY HOSPITAL COMPARED WITH BERGERON'S TWELVE-HOUR SERIES AT CHARITY HOSPITAL

		Gall Bladder Visualization					Calculi	
	No. of Cases	Excellent	Good	Fair	Poor	Non-vis.	Opaque	Lucent
Bilopaque	87	18	12	9	10	38	1	8
Oragrafin Calcium	62	7	8	10	6	31	4	4
Oragrafin Sodium	85	16	22	14	8	25	1	8
Orabilex	10	2	2	0	0	6	1	0
Total No.	244	43	44	33	24	100	7	20
%		17.6	18	135	10	40.9		
Bergeron No.	543	193	128	53	33	136	18	48
Series %		35.5	236	9.8	6.1	25		

TABLE 2
SIDE EFFECTS IN TWO-HOUR SERIES

	No. of Cases	Nausea Mod.	Nausea Severe	Vomiting Mod.	Vomiting Severe	Cramps Mod.	Cramps Severe
Bilopaque	87	10	1	2	0	6	1
Oragrafin Calcium	62	2	0	0	0	1	0
Oragrafin Sodium	85	7	0	1	1	2	1
Orabilex	10	0	0	0	0	1	0

any vomiting. There were no complaints of dysuria, diarrhea, tinnitus, headaches or rash.

Intestinal residue was minimal or nonexistent in 86 per cent of the patients who had Bilopaque, 63 per cent of the patients with Oragrafin calcium, 84 per cent of the patients with Oragrafin sodium and 90 per cent of the patients with Orabilex. A rather pronounced residue was only present in fourteen patients of the total series at the two-hour examination. This residue did not interfere with the examination of the gallbladder.

Discussion

When this study was just beginning to get underway we noted the report of Madell and Elkin[2] who attempted a method of rapid cholecystography with Orabilex. They gave a routine dose of 14.5 grams of Orabilex and took roentgenograms of the gallbladder three hours later. No mention was made of the position of the patient during this time. They found that 39 out of 134 patients (29 per cent) had satisfactory visualization of the gallbladder at three hours. Since they had studied Orabilex only from the standpoint of the rapid examination we thought it would be important to see if other compounds could be used in the same manner. For this reason we used Orabilex in relatively few for our trials and concentrated on the other contrast agents. It was our belief that most of the contrast agents could be used for a more rapid evaluation of the gallbladder if the transport of the opaque medium from the stomach into the small bowel could be accelerated.

The factors of absorption from the small intestine and from concentration in the gallbladder remained to be considered. The study of Madell and Elkin indicates that Orabilex is absorbed quite rapidly. The report of Saltzman[3] indicates that the bile ducts can be visualized with oral use of Oragrafin calcium even when the gallbladder has been removed. For this purpose a double dose of Oragrafin calcium was combined with the administration of morphine sulfate to produce spasm of the sphincter of Oddi. He noted that in five cases in which the gallbladder had not been removed, a high concentration of the medium was obtained in the gallbladder after three hours. We did not observe adequate opacification of the bile ducts except following the administration of the fatty meal. This is probably due to the fact that we used a single dose technique throughout our study. In a patient who was not in the study and who had had the gallbladder removed, we gave a double dose of Oragrafin calcium and demonstrated a partial obstruction of the common duct. Other reports[2, 5] indicate that other oral opaque media might be used in double or triple dose techniques when combined with a drug to produce spasm of the sphincter of Oddi.

We would like to have presented data on 4, 6 and 24 hour follow-up studies of these patients but because of the confusion common in a large charitable institution we found that many times one or more of the other examinations was not timed properly. For this reason we could only present relatively accurate results on the two-hour study. We are planning further attempts to outline the bile ducts in patients who have undergone cholecystectomy.

Summary and Conclusions

A group of 244 patients were studied to see whether the gallbladder could be visualized satisfactorily two hours after the ingestion of an oral contrast medium.

It was found that in 35.6 per cent of this series there was excellent or good visualization of the gallbladder in the two-hour examination. This was considerably less than the 59.1 per cent figure in Bergeron's

previous study from Charity Hospital using the twelve-hour examination.

It was found that side effects were not increased by efforts to encourage the stomach to empty rapidly and thus perhaps aiding in making the procedure more rapidly performed.

In patients who are acutely ill, the aged, or those with cardiovascular disease, intravenous cholegraphy may be less desirable than an oral method. In these patients the rapid method outlined in this paper is recommended.

References

1. Bergeron, R. B.: Cholecystography. J. Louisiana State M. Soc., 1960, 112:377.

2. Lowman, R. M., Davis, L. and Lawson, R.: Improved Techniques in Oral Cholanglography, the Post-cholecystectomy Patient. Surg., Gyn. and Obstet., 1957, 104:622.

3. Madell, S. H. and Elkin, M.: Rapid Cholecystography. Am. J. Digest. Dis., 1960, 5:776.

4. Saltzman, G. F.: Solu-Biloptin (SH 550) as a Contrast Medium for Peroral Cholegraphy. Acta Radiol., 1960, 54:417.

5. Twiss, J. R. and Gillette, L.: Oral Cholangiography, J.A.M.A., 1959, 69:1275.

Laws Cannot Create Lifesaving Drugs

While government regulation can prevent distribution of medicines which are below acceptable standards, no amount of regulation can, in itself, produce a safe and effective medicine. Safety and effectiveness must be built into a drug in the first place by the painstaking, step-by-step production and testing processes of the manufacturer. As members of this committee know, many producers of medicines strive for standards of excellence far higher than any which might be imposed by government. Moreover, government regulation in itself can never *create* lifesaving drugs. This, too, depends in large measure upon the initiative and enterprise of industry.—Eugene N. Beesley, President, Eli Lilly and Company, and Chairman of the Board, Pharmaceutical Manufacturers Association, to House Interstate and Foreign Commerce Committee, August 20, 1962.

Cholecystitis and Cholelithiasis in the Young*

• A Report of 26 cases between 18 and 25 years of age.

ROBERT KAPSINOW, M. D.†
Lafayette

ACUTE and chronic cholecystitis either with or without cholelithiasis in the young, has been regarded as relatively uncommon. Numerous reports of individual cases or small collections of cases abound in the literature. The report of Potter[1] and of Ulin et al.[2, 3] are the most comprehensive. These deal with children from infancy to 15 years of age. A total of approximately 500 case reports are recorded, some of which have proven to be unacceptable for various reasons.[4-9] There are very few case reports dealing with the age group between 18 and 25 years of age. Most of these were acute cholecystitis misdiagnosed as acute appendicitis or acute intestinal obstruction. Few were chronic and still fewer were found to have gallstones. The symptoms except for fever, nausea, vomiting and abdominal distress, were vague and not diagnostically helpful.[10-14]

The series here reported consists of private and charity hospital cases. Of a total of 26 cases, only one occurred in a colored female, the remainder were found in white females. During the period under investigation, 1955 through 1960, there were 24 cases found at the Lafayette Charity Hospital.

During this period there were 67,379 patients admitted to the hospital of whom 25,188 were white and 42,258 were colored, a ratio of 1 to 1.6. The total number of cases that were operated upon for gallbladder disease in this interval was 377 or 5 per 1000 admissions.

TABLE 1
ADMISSIONS

Year	Admissions	Operative Cases
1955	11,662	32
1956	11,829	65
1957	11,364	67
1958	11,210	68
1959	10,210	79
1960	10,494	66
TOTAL	67,379	377
WHITE	25,118	23
COLORED	42,258	1

Of the 26 females, there were 18 that had from 1 to 7 children, or a total of 53 children, averaging about 3 per patient. The aphorism of fat, fair, forty and fertile is definitely broken and does not hold except for the fertile. From a clinical point of view, there was no constant picture of body structure as they varied from the exceedingly thin to the markedly obese. Many gave a long history of various infectious diseases, gastrointestinal complaints of a recurring nature, and diets that were high in carbohydrates.

Most of these women had abdominal distress prior to pregnancy which became more severe, albeit intermittent, during subsequent pregnancies. The pains varied in type, severity, and location comparable to the older age group.

The laboratory findings were of no specific help in diagnosis. Radiologically there were 9 cases that showed a normally functioning gallbladder and 7 that demonstrated gallstones. Of the 12 that were reported as nonfunctioning gallbladders, stones were seen in 6. In other words, 13 of 26 cases displayed shadows of gallstones on the x-ray films.

* Presented at the Eighty-second Annual Meeting of the Louisiana State Medical Society, Monroe, May 8, 1962.

† From the Department of Surgery, Our Lady of Lourdes Hospital and Lafayette Charity Hospital, Lafayette.

TABLE 2
RESUME OF THE 26 CASES

Name	Sex	Race	Age	Para
M.T.	F	W	22	0
I.R.	F	W	23	0
V.O.	F	W	25	ii
L.B.	F	W	20	ii
E.M.T.	F	W	24	i
A.L.	F	C	25	vii
V.B.	F	W	24	iv
W.M.G.	F	W	21	iii
M.P.	F	W	19	0
R.G.	F	W	25	iii
E.McD.	F	W	25	iv
G.B.	F	W	21	0
L.M.P.	F	W	24	vi
M.M.C.	F	W	23	iii
G.S.	F	W	21	ii
M.L.J.	F	W	18	iii
D.S.	F	W	19	i
D.R.	F	W	23	0
M.S.	F	W	19	i
E.M.	F	W	18	i
R.P.	F	W	22	iii
N.Q.	F	W	22	ii
G.M.	F	W	22	?
E.F.	F	W	18	iii
N.P.	F	W	21	ii
E.P.	F	W	21	0

Discussion

This series of cases is of interest because of the large number of white females in relation to the colored in this age group that had chronic gallbladder disease with gallstones in each instance. While it is known that gallbladder disease is more prevalent in the adult white than in the colored, the ratio is not as disproportionate as in this series.

Although no effort was made to uncover an etiologic basis for the disease in this age group, the history in most cases suggested gallbladder involvement much earlier in their lives than was suspected because of the vagueness of the symptoms. This seems obvious from the high incidence of gallstone visualization.

A factor of interest is the high degree of fertility in the group. It suggests the necessity for more intensive studies on cholesterol and fat metabolism in pregnancy as it may relate to gallstone formation.

Summary

1. Twenty-six cases of acute and chronic cholecystitis with gallstones in the age group between 18 and 25 have been presented.

2. Only 1 case occurred in a colored female who was a para vii.

3. Of the remaining 25 cases all of whom were white females, 18 had borne from 1 to 6 children.

4. The majority of the cases presented a chronic cholecystitis with varying number of stones.

5. The diagnosis depends upon an awareness of the possibility of gallbladder disease in the young.

Note: The author expresses his appreciation to Mrs. Nellie Landry, medical record librarian of the Lafayette Charity Hospital, and Faye Kapsinow, B.A., M.T. (ASCP), for their assistance.

References

1. Potter, A. H.: Gallbladder Disease in the Young Subjects. Surg. Gynec — Obstet. 46:795, 1928.

2. Ulin, A. W., Nosal, W. L., and Martin, W. J.: Cholecystitis in Childhood. J.A.M.A. 147:1443, 1951.

3. Ibid.: Cholecystitis in Childhood; Associated Obstructive Jaundice. Surgery, 31:312 (Feb.) 1952.

4. Beals, J. A.: Cholecystitis and Cholelithiasis in Children. South. M. J. 21:666 (Aug.) 1928.

5. DeCamp, P. T., Ochsner, A., Baffes, T. G., Bancroft, H., and Bendel, W.: Timing in the Surgical Treatment of Acute Cholecystitis. Ann. Surg., 135:745, 1952.

6. Gibbon, G. W.: Acute, Sub-acute, and Chronic Cholecystitis in a Twenty Month Old Infant. Canad. M. Assoc. J. 67:150 (Aug.) 1952.

7. Forshall, I. and Richam, P. P.: Cholecystitis and Cholelithiasis in Childhood. Brit. J. Surg., 42:161, 1954.

8. Glenn, F. and Hill, M. R.: Primary Gall Bladder Disease in Children. Ann. Surg., 139:302 (Mar.) 1954.

9. Ahrens, W. E.: Gall Bladder Disease in Children. Clin. Proceed. Child. Hosp. Washington, D. C., 13:94 (Jan.) 1957.

10. Ibid.: Cholelithiasis and Cholecystitis in Infancy and Childhood. A review. Clin. Proceed. Child. Hospital. Washington, D. C., 13:85 (Jan.) 1957.

11. Bonta, J. A. and Lovingood, C. G.: Acute Cholecystitis in Childhood. Report of a case. Surgery, 31:309 (Feb.) 1952.

12. Arnspiger, L. A., Martin, J. G. and Kremper, H. O.: Acute Non-Calculous Cholecystitis in Children. Am. J. Surg., 100:103 (July) 1960.

13. Schwei, G. B.: Cholecystitis and Cholelithiasis in Childhood. Report of a case. Wisconsin M. J. (Aug.) 1958.

14. Cole, F. R.: Gall-bladder Disease in Young Women. New York State J. M. 56:1808 (June 1) 1956.

The Highly Ingrown Nail

• A condition painful and perhaps important to the patient, but a "very lowly thing" to the physician.

FRED A. MARX, M. D.
Monroe

THE ingrown nail is a problem which has plagued mankind probably since mankind began and will probably continue to plague him from now on or as long as man has nails. In this discussion the term highly ingrown nail refers to the fact that it is ordinarily considered by many physicians as a very lowly thing. It is, however, to the individual who has the ingrown nail a very "highly" problem; hence, the terminology. Therefore it behooves every practitioner to understand the mechanism of the ingrown nail and better methods of treatment.

Definition

First, let us consider the definition. We think of an ingrown nail as growing laterally into soft tissue of the distal phalanx. I suppose this is the reason for the term ingrown. This actually is a misnomer, however, for a nail does not grow laterally but distally and only in rare instances of marked deformity, does a nail grow otherwise; as we will see henceforth, the proper term should be "the foreign body nail".

How are ingrown nails produced? By any one of many means, a corner of a nail is removed proximal to the most distal end of the sulcus. This may occur by a nail breaking off accidentally or more commonly by being cut in this manner by the individual himself. The sulcus distal to the fragmented nail then becomes obliterated since there is no reason for it to remain a sulcus. The nail continues to grow distalward and the corner of the fragmented nail moving in this direction must enter the soft tissue of the obliterated sulcus. This produces a foreign body reaction and local inflammation occurs with the production of erythema, edema, pain and a purulent discharge. A frank abscess may occur and may burrow beneath the nail to produce a subungual abscess. It may produce a paronychia and/or eventually possibly a bone felon, in extreme instances.

Another favorite method of production of the ingrown nail occurs following the improper treatment of a previously ingrown nail. Frequently the physician will excise one-fourth or one-third of the ingrown nail by making an incision in the nail perpendicular to the eponychium. This removes the offending nail for the time being; however, as the new nail begins to move distalward, once again a sharp corner moving in an obliterated sulcus will produce a foreign body reaction. This often accounts for the recurrent ingrown nail.

There is also the condition of hypertrophy of the paronychium by tight or poorly fitting shoes but this is not actually apropos to this paper.

Treatment

Proper treatment is evident after several precepts are recognized. The first premise is that the primary problem is foreign body reaction. Therefore, irritation of the foreign body must be removed. Secondly, we must recognize that we are unable to control the direction of growth of a nail, which brings us to the following conclusion: we cannot make a nail accommodate a nail bed; therefore we must make the nail bed accommodate the nail. With these facts in mind, let us consider the methods of treatment which might be used depending on the severity of the problem.

* Presented at the Eighty-second Annual Meeting of the Louisiana State Medical Society, May 9, 1962, Monroe.

When the corner of the nail has been cut back or broken off a short distance proximal to its termination, this is easily treated by slipping a piece of cotton beneath the corner of the nail, thus elevating it from its bed and causing the soft tissue to be depressed below it. A drop of 50 per cent silver nitrate on this bit of cotton helps to eliminate the inflammation associated. The procedure is only slightly painful and relief is gained very quickly. Cotton is reapplied periodically until the nail has completely grown forward and the patient is instructed then to allow this nail to remain protruded slightly beyond the end of the sulcus. The more severe type of ingrown nail in which case the nail is cut or broken back approximately 50 per cent of its length, may be handled in a similar way; however, it is wise to inject a local anesthetic agent into the tissue alongside the nail prior to this procedure. After anesthesia has been obtained this tissue should be lifted away from the nail and the sulcus cleansed. In this way one can inspect the nail with ease and evaluate the condition. If the nail itself appears healthy then possibly packing the sulcus with cotton and application of silver nitrate may be sufficient. Granulomatous hypertrophy should be excised and cauterized. Occasionally, however, the nail tends to grow in the shape of the letter "C" and in this case, a plastic procedure on the sulcus needs to be done. This consists simply of incising the soft tissue distal to the lateral edge of the nail throughout the length of the nail and packing this open with gauze or cotton. This then, brings about the formation of a sulcus through which the nail is allowed to grow without producing a foreign body reaction. This of course requires that the sulcus be kept separated with packing until the nail has completed its growth.

Another method of handling this problem is of course by excising the offending corner of the nail; however, this should be done under anesthesia, usually nerve block anesthesia and should be accomplished by removing as little of the nail as possible and by aiming the scissors toward the proximal corner of the nail. As the new nail grows in the future, it will have a beveled edge and will make its own sulcus as it proceeds distally.

If on inspection of the offending corner of nail it is discovered that the nail has begun to disintegrate, has become soft, and is elevated from its nailbed, then packing will probably be of no avail. This is due to subungual infection. This type nail is better excised in the method mentioned.

These are methods of handling the ingrown nail that can be very easily accomplished in the physician's office. No prosthetic appliances should be necessary nor are more drastic means of treatment of the nail proper indicated.

Occasionally nails are badly deformed and produce continuing complaints because of pressure exerted by the shoes and require removal permanently. This may be accomplished by removal of the nail matrix beneath the proximal one-third of the nail. This may be done for part or all of the nail; however it is of most importance to be certain that the corners of the nail matrix are also removed. If these are allowed to remain, spikelike nails will be present very soon arising from these corners.

Summary

Definition and etiology of the ingrown nail have been discussed. Treatment is simple in most cases and can be performed in the office with ease and is based on the premise that "we cannot force a nail to accommodate a nail bed, therefore, we must make the nail bed accommodate the nail." Success depends on treatment by both the physician and patient until the nail has completed its distal growth.

The Journal of the Louisiana State Medical Society

Established 1844

Published by The Journal of the Louisiana State Medical Society, Inc. under the jurisdiction of the following named Journal Committee:

Ralph H. Riggs, M. D., Ex-Officio
C. M. Horton, M. D., Chairman
Sam Hobson, M. D., Secretary
Edwin H. Lawson, M. D.
J. E. Knighton, M. D.
M. D. Paine, Jr., M. D.

EDITORIAL STAFF

PHILIP H. JONES, M. D., Editor

COLLABORATORS—COUNCILORS

Nicholas J. Chetta, M. D.
J. E. Clayton, M. D.
Guy R. Jones, M. D.
C. E. Boyd, M. D.
Henson S. Coon, M. D.
John L. Beven, M. D.
J. Y. Garber, M. D.
R. E. C. Miller, M. D.

C. GRENES COLE, M. D., General Manager
1430 Tulane Avenue

Subscription Terms: $4.00 per year in advance, postage paid, for the United States; $5.00 per year for all foreign countries belonging to the Postal Union.

News material for publication should be received not later than the eighteenth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

Manuscripts should be addressed to the Editor, 1430 Tulane Ave., New Orleans, La.

The Journal does not hold itself responsible for statements made by any contributor.

Editorial

Fatty Liver

A recent study of 270 patients with biopsy proven fatty liver and a review of the literature presents the clinician with much useful knowledge.[1] The patients were selected from 5,000 patients receiving percutaneous liver biopsies between July 1948 and December 1961. The term fatty liver in this comprehensive report has been used "to denote the presence of a significant increase of morphological evidence of fat on biopsy specimens in the absence of other primary pathological alterations".

In most instances there was good correlation between the chemical and morphological findings. Analysis of the fat demonstrated mostly triglycerides. It was stated, however, that considerable amounts of cholesterol esters may be present with a high cholesterol intake. Morphologically the specimens were classified as 1 plus when less than 10 per cent of the histological section was occupied by fat globules. A designation of 2 plus for mild fatty liver was used when fat globules occupied 10 to 30 per cent; 3 plus or moderate when 30 to 70 per cent of the histological section consisted of fat; and 4 plus or severe fatty when more than 70 per cent of the section was occupied by fat globules. In this study 125 patients had mild fatty liver, 58 moderate fatty liver and 88 severe fatty liver. It was considered that the recognition of fatty liver in man was possible only by the study of biopsy specimens or autopsy material.

Etiological factors vary in different parts of the world. In many areas improper diet due to economic circumstances is responsible for most of the cases of fatty liver. In Europe and the United States fatty liver is found most often in patients with a history of ingesting large quantities of alcoholic beverages. Two hundred and six or 77 per cent of the patients in this series had consumed large

[1] Leevy, Carroll M.: Fatty Liver; a Study of 270 Patients with Biopsy Proven Fatty Liver and a Review of the Literature, Medicine 41:249 (Sept.) 1962.

amounts of alcoholic beverages. Equally severe fatty liver condition was noted in 64 or 23 per cent of the patients who had no history of ingesting alcoholic beverages. Abnormal dietary patterns were present in each of the patients of this group.

Regardless of contributory factors fatty liver results from an overall disparity between the rate of deposition and removal of neutral fat. A complicated series of biochemical mechanisms contributes to the ultimate picture. Etiological factors considered were diet, the effect of alcohol, diabetes and various miscellaneous factors such as endocrine influences, drugs and toxic agents. The effects of diet were regarded as important although difficult to interpret in the light of results reported in animal experimentation.

In the series of patients reported each of the nonobese patients had a history of ingesting diets deficient in protein and lipotropic substances. Twenty-five of these nonobese had normal dietary habits except for an occasional irregularity; 67 ate well except during drinking bouts or periods of anorexia; 102 had diets grossly deficient in animal and vegetable protein; 40 had eaten only carbohydrate foods for prolonged periods. Transformation of a normal liver to a severely fatty liver was observed in 4 alcoholic patients whose total food intake over a one to three month period was alcohol and pretzels; and in 1 with heart failure who was maintained on glucose infusions and oral carbohydrate feedings for two months.

The effect of alcohol was considered in its various biochemical and clinical aspects. There was no correlation between the severity of fatty metamorphosis and the amount or duration of alcoholic intake. Serial biopsies failed to reveal a significant increase in the histologic evidence of liver fat after three days of continuous consumption of whiskey without eating any food (2 patients), continuous consumption of two pints of whiskey daily for one week (1 patient), an intake of one to two pints of whiskey daily for six weeks while maintaining an adequate protein intake (1 patient). The relationship of diabetes was regarded as complicated. The feeding of choline alone had little effect on fatty metamorphosis in patients with diabetes but clinical control of carbohydrate abnormalities caused fat mobilization.

In non-alcoholic patients hepatic steatosis in similar degree was encountered in patients with a variety of diseases, diabetes and heart failure being the most frequent. The clinical abnormalities were proportional to the degree of liver fat and disappeared with its mobilization. Hepatomegaly was present in 75 per cent, hepatic tenderness in 18 per cent and jaundice in 15 per cent. Noted also were fluid accumulation, spider angiomata and splenomegaly. Six patients had pain severe enough to lead to surgical exploration. Anemia was present in 22 per cent, albuminuria in 24 per cent, azotemia in 9 per cent and hyperglycemia in 11 per cent. However, both hyperglycemia and hypoglycemia were noted in patients of this series. Five patients with severe fatty liver and one with moderate fatty liver had blood sugar of less than 40 mgs.% accompanied by coma at the time of initial hospitalization. No correlation was demonstrated between the amount of liver fat and biochemical liver function tests in either experimental animals or man. An alteration in the total quantity or composition of serum protein was the most frequently noted biochemical disturbance. Abnormal sulfobromophthalein (BSP) retention provided the best index to the presence of fatty liver; however, a single 45-minute specimen was often normal. A total serum bilirubin of more than 1.0 mgs.% was present in 30 per cent of the patients tested. Oxalacetic and pyruvic transaminases were normal or only slightly elevated in serum from patients with hepatic steatosis.

Numerous studies demonstrated the efficacy of a diet containing adequate protein in mobilizing liver fat in subjects without complicating diseases. The time required was four to six weeks. The author stated the reason for special interest in fatty liver is that its continuation may

lead ultimately to overwhelming infections, fat embolism or cirrhosis and its consequences. He stated that the association of infections with fatty liver in the pre-antibiotic era was a major cause of morbidity and mortality. Utilizing the usual pathological procedures including light microscopy, electron microscopy and autoradiography the author summarizes the observations as establishing for man a sequence of fatty liver, development of fatty cysts with rupture, simple necrosis, round cell inflammation, fibroblastic proliferation and regeneration of parenchymal cells leading to the lobular distortion characteristic of cirrhosis. Transition of fatty liver to cirrhosis was observed in 16 alcoholics and 2 non-alcoholic patients, one of the latter having diabetes and one chronic congestive heart failure. Serial biopsies indicated two mechanisms mainly responsible for development of cirrhosis and heart failure: (a) acute passive congestion followed by necrosis, collapse of reticulum and eventually cirrhosis; (b) fatty liver followed by fibrosis and cirrhosis. Because of the frequency of transformation of fatty liver to cirrhosis serial biopsy of the liver was advised and with a return of fat, it was advised that the patient be placed on intensive inpatient therapy. The overall cost of removing fat from the liver during the four to six week period is approximately $750.00 whereas the cost of treatment of cirrhosis and its complications including provision for terminal care averages $8,250.00.

The author considers that hepatic steatosis is both preventable and curable. This monogram is a highly informative condensation of clinical and pathological observations in which a creditable effort is made to correlate the findings with the literature. The clinician will be well repaid for studying the article in the original. Since fatty liver may be associated with symptom complexes which are protean, a knowledge of its manifestations is of importance to all who practice medicine.



ORGANIZATION SECTION

The Executive Committee dedicates this section to the members of the Louisiana State Medical Society, feeling that a proper discussion of salient issues will contribute to the understanding and fortification of our Society.

An informed profession should be a wise one.

BUSIEST MAN IN TOWN

There is an old saying: "If you have an important job that needs to be done, call the busiest man in town." The busy man will not only find time to do the job, but he will do it well.

We can think of no one who fits the "busiest man in town" description better than Dr. Edward R. Annis, president-elect of the American Medical Association.

We had an opportunity to observe this "busy man" in action when he was in New Orleans recently to address the staff banquet of the Southern Baptist Hospital.

Dr. Annis' schedule for the day was as follows:

8:15 a.m. to 8:40 a.m.—Meeting in Dr. Annis' hotel room to discuss program for the day and to prepare for press conference.

8:45 a.m. to 10:15 a.m.—Press interviews with reporters from the newspapers, radio and television stations.

10:30 a.m. to 11:15 a.m.—Visit to television station for studio news film interview.

11:25 a.m. to 11:40 a.m.—Brief visit to offices of Louisiana State Medical Society to confer with president and secretary-treasurer.

11:45 a.m. to Noon—Visit to dean's office of L S U School of Medicine to be interviewed by reporters from L S U student newspaper.

Noon—to 1:00 p.m. Address to a joint meeting of the students of the Tulane and L S U schools of medicine arranged by Dr. Philip H. Jones, Chairman of the Louisiana State Medical Society's Committee on Liaison with Medical Schools.

1:00 p.m. to 1:10 p.m.—Informal discussions with individual medical students following address to student bodies.

1:20 p.m. to 2:20 p.m.—Business lunch with AMA and Louisiana State Medical Society representatives.

2:30 p.m. to 4:00 p.m.—Television station to make half-hour video tape program for delayed broadcast.

4:15 p.m. to 5:30 p.m.—Radio station to make 30 minute tape and two five minute tapes for the Louisiana State Medical Society.

5:45 p.m.—Long distance phone calls, mail, paper work, etc.

7:15 p.m.—Meet officers of Baptist Hospital staff.

7:30 p.m. to 10:00 p.m.—Address to open staff meeting of Southern Baptist Hospital.

10:15 p.m.—Meet with Dr. Ralph H. Riggs, President Louisiana State Medical Society.

Following Day

8:00 a.m.—Depart from hotel.

9:00 a.m.—Flight to Miami.

1:00 p.m.—Speaking engagement in Miami.

2:30 p.m.—See patients in office.

This is just a typical example of the schedule Dr. Annis keeps in going about the country working for us.

While Dr. Annis was with us, we had a chance to glance briefly at his schedule for 1963 as of early January. Conservatively, we would estimate that he will spend 80 per cent of this year "on the road." Considering the great amount of time Dr. Annis spends away from home, we cannot help but say a word of thanks to Mrs. Annis and the eight Annis children for the great sacrifice they too are making for the cause of medicine.

Physicians owe a great debt to this "busy man" who is working around the clock for them.

Speaking of Dr. Annis, it would be appropriate to congratulate the officers and the members of the medical staff of the Southern Baptist Hospital who were responsible for bringing him to New Orleans. For this event, the doctors of Baptist Hospital opened their staff dinner to the public so that as many as possible might hear Dr. Annis. The best gauge of the tremendous success of this meeting was the fact that over 1,100 people paid to hear Dr. Annis speak.

We are receiving requests for copies of Dr. Annis' address and for literature on the King-Anderson Bill and the Kerr-Mills Law from far away and widely different areas. Most assuredly his message has been favorably received and has greatly aided our cause.

We sincerely hope that our members throughout the state will enthusiastically dedicate themselves to working to defeat the King-Anderson legislation which, if enacted, will socialize the medical profession.

You will find below a comparison between the Kerr-Mills Law and King-Anderson Bill in providing health services for the aged, which, we hope, will be useful in demonstrating the great advantages the Kerr-Mills Law offers as compared with the limited services our older citizens would receive under the Social Security King bill proposed by President Kennedy.

This study takes into consideration only the question of comprehensiveness of health services to the aged.

It is obvious from the foregoing chart that the full potential benefits of the Kerr-Mills Law are much greater than those of the King-Anderson Bill.

By "full potential benefits" is meant the good which could accrue to the beneficiaries of the law if all the benefits possible under the law were implemented.

However, it must be understood that the full potential benefits of the Kerr-Mills Law can only be realized if the medical profession will actively and earnestly engage its efforts in implementing all the provisions of the law in accordance with community needs.

The Kerr-Mills Law is more soundly conceived than the King-Anderson Bill because:

1. It allows the program funds to be used by States in combination with other health program funds for developing comprehensive services in environmental hygiene, preventive medicine, therapeutic rehabilitation, nursing follow-up, and occupational and recreational therapy for the aged in accordance with particular community needs.
2. It allows for a balanced influence over program development between state and federal government.

Although the Kerr-Mills Law tends to perpetuate the fragmentation of community health services administered by State Health and Welfare

Departments, the King-Anderson Bill completely separates its operation from the already established programs of state and local government; nor can its funds be used to support the organization and development of community health services that are needed by the aged.

COMPARISON BETWEEN KERR-MILLS LAW AND KING-ANDERSON BILL IN PROVIDING HEALTH SERVICES FOR THE AGED

Provisions	Kerr-Mills	King-Anderson
Eligibility Requirements	65 years or over who are declared as unable to pay by State policy.	65 years and over who are covered by social security.
Care in the Physician's Office	Yes	None
Physician Services in Home	Yes	None
Hospital Care	Yes	Yes
How much Hospital Care	Depends on State Policy; no restrictions in basic law.	90 days period; plus 90 days after a continuous 90 day lapse without hospital or nursing home care.
Hospital Cost Paid by Patient	None	$10.00 per day for 1st 9 days with minimum deduction of $20.00.
Payment to Physician for Hospital Care	Yes	None, except if employed by hospital such as pathologist, anesthesiologist, psychiatrist, radiologist.
Out-patient Hospital Care	Yes	No provision for continuous outpatient care; diagnostic study permitted with patient paying 1st $20.00.
How much Nursing Home Care	Depends on State Policy; no restrictions in basic law.	180 days less 2 days for each day spent in hospital during period.
Physician's Services in Nursing Home	Yes	None
Dental Services	Yes	None
Part-time Nursing at Home, and medical social services	Yes Depends on State Policy; no restrictions in basic law.	Yes Limited to 240 such individual services per year.
Physical, Occupational, or Speech Therapy at Home	Yes Depends on State Policy; no restrictions in basic law.	Yes Limited to 240 such individual services per year.
Part-time Home-Maker Services	Yes Depends on State Policy; no restrictions in basic law.	Yes Limited to 240 such individual services per year.
Medical Supplies and Appliances for Home Care	Yes	Yes
Drugs and Biologicals for Home Care	Yes	None
	Authorized by State Legislature. Administered locally.	Under Social Security Agency of the Federal Government. Administered and controlled from Washington.

MEDICAL NEWS SECTION

CALENDAR

PARISH AND DISTRICT MEDICAL SOCIETY MEETINGS

Society	Date	Place
Ascension	Third Tuesday of every month	
Calcasieu	Fourth Tuesday every other month	Lake Charles
East Baton Rouge	Second Tuesday of every month	Baton Rouge
Jefferson	Third Thursday of every month	
Lafayette	Second Tuesday of every month	Lafayette
Morehouse	Third Tuesday of every month	Bastrop
Natchitoches	Second Tuesday of every month	
Orleans	Second Monday of every month	New Orleans
Ouachita	First Thursday of every month	Monroe
Rapides	First Monday of every month	Alexandria
Sabine	First Wednesday of every month	
Tangipahoa	Second and fourth Thursdays of every month	Independence
Second District	Third Thursday of every month	
Shreveport	First Tuesday of every month	Shreveport
Vernon	First Thursday of every month	

UNIVERSITY OF ILLINOIS COLLEGE OF MEDICINE STUDIES USE OF TEACHING MACHINES IN MEDICAL EDUCATION

Can "teaching machines" be used to save time and effort for professors in medical colleges?

Using a $61,465 grant from the United States Public Health Service, the University of Illinois College of Medicine in Chicago is working on an answer to this question.

"Mechanical teaching devices may be able to free instructors from routine tasks of introductory instructions and allow them to devote the time saved to individual needs of individual students," according to Dr. George E. Miller. Dr. Miller, who is supervising the grant, is director of Research in Medical Education for the University of Illinois.

"It is wasteful," he added, "to use highly-skilled professors to do things machines may be able to do because there are so many things that **only** teachers can do, and their time is precious."

The first of the teaching machine programs completed by the University of Illinois group was prepared by Dr. Arnold V. Wolf, professor and head of the Department of Physiology, in collaboration with Norman Crowder, a distinguished figure in the field of educational programming. This program on body fluid metabolism is equivalent to material delivered in a series of five lectures. It will be tested as a substitute for the lectures during the Spring quarter at the University of Illinois College of Medicine and two other medical schools outside the state.

"When reading a standard text or listening to a lecture," Dr. Miller said, "a student often assumes he has learned the material, but frequently finds when tested that he cannot apply what he has learned."

Dr. Miller pointed out that the programmed form forces the student to use the material as he learns it.

The machine presently being used by the College of Medicine looks something like a compact television set. It is called the Auto-Tutor and is made by United States Industries. The unit consists of a viewing screen and a row of vertical buttons that activate a microflim projector.

The student sits before the screen and views a written page of script. After reading the material, he finds a question at the bottom of the page with a choice of several answers. He pushes that button which corresponds to the letter identifying the answer he has selected. A new page of script now appears.

If he has choosen the right answer, he is given additional information and asked to solve another problem based on the material he has learned.

If, on the other hand, his answer is wrong, remedial instruction, which will help to correct his error, is offered and he is then returned to the original sequence to select the proper response. Each page leads the student to more questions which continue the pattern. Each learner can thus proceed at his own rate instead of that of a whole class.

This branched program — in which the student's answers determine his progress — can be presented on a machine like the Auto-Tutor or in booklet form. Both methods give the student an opportunity to learn through error.

There is also a linear method of programming which differs in that it provides information in smaller amounts and takes the student through material in short steps with no remedial aid.

"The branched form is less well studied, but seems more in keeping with the objectives of medical education," according to Dr. Miller, because it does force the student to use the information he acquires to solve problems.

Three additional courses are now in various stages of programming for the branch method.

One covering "Amino Acids, Polypeptides and Proteins" is being prepared with Dr. Terrell C. Myers, associate professor of biological chemistry. Another in "Endocrinology" is being prepared with Dr. Robert J. Ryan, associate professor of medicine. A third program, on "Kidney Function", is being prepared with Dr. Lionel

M. Bernstein, assistant professor of medicine.

Each of these subject-matter experts is working with technical experts under the direction of Dr. Jerome Allender, research associate in the office of Research in Medical Education. Technical experts include Dr. Arthur Elstein, Dr. Margaret Littman, Mrs. Grace Hered, Dr. Wendel Landmann, and Dr. J. Walter Giffee.

As each program is completed, it will be tested against more traditional forms of instruction to determine the relative efficiency of alternate methods. Although the programs are designed primarily for instruction of undergraduate medical students they may also be useful in teaching interns and residents, and as refresher courses for physicians in practice.

INTERNSHIPS IN MEDICAL LIBRARIANSHIP

One-year internships in medical librarianship will be given at the end of the 1962/63 school year by Emory University School of Medicine Library and by the National Library of Medicine. These internships are tailored to train talented young people to assume increasingly responsible positions in medical libraries. Rotating assignments in each division of the institution plus salary are provided. Graduation from an accredited library school is a prerequisite and a background in the biological sciences is desirable. Emory requires that applicants be U.S. citizens or have received first citizenship papers.

Apply to Miss Mildred Jordan at the A. W. Calhoun Medical Library, Emory University, Atlanta 22, Georgia for the Emory internships. The Director of the National Library of Medicine, 8600 Wisconsin Avenue, Bethesda 14, Maryland has NLM applications. The deadline for applications was March 15, 1963.

SOUTHWEST ALLERGY FORUM

The Southwest Allergy Forum will meet at the Granada Hotel in San Antonio, Texas on April 21, 22 and 23, 1963. Dr. Bernard T. Fein of San Antonio is President of the Forum for 1963 and Dr. Boen Swinny, Sr. is Program Chairman. Correspondence is to be directed to Dr. Boen Swinny, Jr., 2-G Medical Professional Building, San Antonio 12, Texas.

AMERICAN CANCER SOCIETY

The 1963 Scientific Session of the American Cancer Society will be held at the Biltmore Hotel in New York City, October 21-22. This will be a conference on **Unusual Forms and Aspects of Cancer in Man.**

BOOK REVIEWS

Differentiation Between Normal and Abnormal in Electrocardiography; by Ernst Simonson, M. D., The C. V. Mosby Company, St. Louis, 1961. 328 pp., $13.50.

This book represents a rather unique contribution in an area in which books are already plentiful. It is an attempt to present primarily a statistical analysis of the differentiation of abnormality and normality in the electrocardiogram with emphasis on general criteria for abnormality and little regard for specific diagnostic criteria. Doctor Simonson, long interested in this aspect of electrocardiography is able to draw from a large body of data and a large bibliography.

Appropriate to the basically statistical approach of the book, the concept of normality receives a lot of attention. As a matter of fact, the greater part of the book is devoted to presentation of data relevant to defining the "normal" range. The selection of a normal reference population of patients, the sources of variability of the electrocardiogram in the normal population, the selection of criteria from a normal population, and some of the standards of abnormality are discussed at length. The various electrocardiographic stress tests are analyzed as means of improving the diagnostic sensitivity of the electrocardiograph. This analysis is detailed and informative. There is a brief chapter on the distribution of electrocardiographic patterns in the normal individual, a chapter on the spatial vectorcardiogram, and short chapters on minor electrocardiographic changes and biophysics of electrocardiographic analysis.

The chapter on vectorcardiography will be somewhat obscure to those not versed in this area since there is no attempt made to define terms or clarify concepts. It discusses the present limitations of the vectorcardiogram mainly with reference to the multiplicity of lead systems and lack of standardization. The chapter on biophysical bases of electrocardiographic analysis raises some interesting points but the discussion is quite brief and selective.

The book is definitely not appropriate for a beginning learner in electrocardiography. Its intention is to amass a lot of data and present a sophisticated discussion of selected aspects of electrocardiography. It is replete with tables and graphs and will be valuable as a reference man-

ual for the practicing cardiologist. For the average internist and cardiologist the book will be tedious reading, partly because the statistical approach to disease is not exciting to most physicians and partly because Doctor Simonson's style of writing and mode of presentation are unadorned and awkward though sound. However, Doctor Simonson has accomplished his expressed purpose admirably and every cardiologist and electrocardiographer will do well to become acquainted with the book.

RALPH LAZZARA, M. D.

Primer of Clinical Measurements of Blood Pressure; by George E. Burch and Nicholas P. De Pasquale. C. V. Mosby Company, p. 141, 1962. $5.50.

Dr. Burch and associates have written a number of excellent short texts on cardiovascular subjects, among which are *A Primer of Electrocardiography* and *A Primer of Venous Pressure.* This is another of their series. The first chapter gives a brief history of the development of blood pressure measurement which began in 1733 with the work of Stephen Hale, determining the direct arterial pressure in a variety of animals.

The second chapter describes the physiology of arterial blood pressure. This section first develops the concept of systolic, diastolic, and mean arterial blood pressure. This section first develminants of arterial pressure which are cardiac output, peripheral vascular resistance, volume of blood in the arterial system, viscosity of the blood, and elasticity of the arterial walls. The chapter ends with a brief summary of the mechanisms by which blood pressure is regulated. The next chapter is entitled, "The Clinical Measurement of Arterial Pressure." The aneroid and mercury manometers are described as well as the other requisites for determination of the arterial pressure such as width of cuff, position of patient and attitude of physician. The chapter ends with the theoretic basis of blood pressure measurement.

The fourth chapter discusses the sources of error in the clinical determination of arterial blood pressure. These include faulty technique, defective apparatus, physician error, and failure to consider the patient adequately. The next chapter considers the factors that affect the arterial pressure. These are the qualities inherent in the patient or environment that could affect the blood pressure reading. Those considered are age, sex, body weight, race, heredity, pregnancy, climate, weather, altitude, sleep, diet, occupation, arrhythmia, and resistance of artery to compression. The sixth chapter discusses the normal values of arterial blood pressure.

The last chapter briefly describes the diagnostic applications. In this section a number of important topics are discussed, such as blood pressure difference in arms and legs and both arms, pulsus alternans, pulsus paradoxus, pulse pressure, Crampton's test, Barringer's test, and cold pressor test, the Regitine test, and the histamine test.

Because of the great emphasis placed today by physicians and patients on the determination of the blood pressure, this excellent treatise should be of value to medical students and physicians alike.

JOHN T. LECKERT, M. D.

Fundamental Skills in Surgery; by Thomas F. Nealon, Jr., M. D. W. B. Saunders Company, Philadelphia, 1962. 289 pp. $8.50.

In order to master the many techniques and procedures which he is expected to know, the surgical neophyte must either consult a senior resident or search through many texts. By discussing a variety of basic surgical subjects, Dr. Nealon has provided an excellent solution to this problem. *Fundamental Skills in Surgery* is a book in which may be found the answers to many of the questions of "How?" It does not purport to be a reference or operative manual; rather, the emphasis is on the little things in surgery which can facilitate the routine duties of the trainee.

The sections on "Operating Room Conduct", "Trauma", "Chest" and "Abdomen" are outstanding. The rest of the chapters — "Dressing of Wounds", "Minor Surgery" and "Gastrointestinal Intubation," to name but a few—are replete with suggestions and thorough descriptions of basic skills. Meaningful illustrations add a great deal to the value of the book.

Although the book has been written for the surgical intern and junior resident, it deserves a place in the libraries of operating room and emergency room nurses.

EDWARD S. LINDSEY, M. D.

The Chemistry and Physics of Anesthesia; by John Adriani, Springfield, Illinois, Charles C Thomas, Publisher, Ed. 2, 1962, 849 pp., revised and enlarged. $28.50.

The first publication of the Chemistry of Anesthesia has become a classic and has maintained its position, unrivaled, for the past sixteen years. This is most remarkable in the face of the tremendous advances made in anesthesia and allied sciences during this period. It also speaks well for the basic approach and clear presentation of the first edition and furthermore establishes the fact that there is a real need for such a book.

The second edition follows the same general organization and purpose, that is, to provide a background in basic sciences for those interested in anesthesia. The material treated in the second edition is handled in more detail and made current with the knowledge that has accumulated since the first printing. The scope of coverage has been so broadened (almost twice the amount

of printed material), that the second edition approaches being a new text rather than a mere revision of the original work.

Part I, Inorganic Chemistry Related to Anesthesia. This section is enhanced by the addition of more physics pertaining to anesthesia. The number of illustrations has been increased and the clarity has been improved.

Part II, Organic Chemistry Related to Anesthesia, has six new chapters to include subjects not treated in the original edition, such as tranquilizers and neuromuscular blocking agents.

Part III, Biochemistry Related to Anesthesia, reviews the same material as in the old edition, but in a more comprehensive manner to include recent advances in the subjects of biochemistry and body fluids.

In his latest and monumental work, one can appreciate the author's diligent efforts to present the profession with a text containing concise, pertinent and authoritative information.

The publisher has provided a well bound, attractive and clearly illustrated volume, printed on a high grade of paper.

Dr. Adriani's book is recommended for the clinician and research worker, and is a "must" for those interested in the administration of anesthetics.

J. B. Parmley, M. D.

Cerebral Vascular Diseases. Third Conference. Grune & Stratton. 247 pp. $5.75.

This book is the edited transcript of the third conference on cerebral vascular diseases held in Princeton in January, 1961, under the sponsorship of the American Neurological Association and the American Heart Association. Participating are over fifty authorities in the field of cerebral vascular disease, including neurologists, internists, neuropathologists, neurosurgeons and vascular surgeons.

The discussions are limited to occlusive or ischemic cerebral vascular disease and this is classified into three major groups: the impending stroke (transient ischemic attacks), the progressing stroke and the completed stroke. The pathogenesis, clinical diagnosis, special diagnostic methods, and therapy of each group is presented, the longest discussion being given to the impending stroke group where therapy would appear to be most promising. The problem of accurate evaluation of therapy in vascular disease is also fully presented.

One cannot but be impressed by the great deal of excellent work which has been done in recent years on this problem. These authors have rejected the hitherto largely fatalistic attitude to "strokes" and are tackling the problem with enthusiasm. However, the limitations of present therapy are all too obvious and recognized by at least some of the authors. This must be due, at least in part, to the late stage of cerebral vascular disease at which such therapy is aimed. Nevertheless, such work has resulted in a greater understanding of the factors involved and brings sharply into focus the major problems of pathogenesis and prevention of advanced cerebrovascular disease.

Ruth D. Paterson, M. D.

Self Hypnosis: A Conditioned-response Technique; by Laurance Sparks, Grune & Stratton, 1962. 255 pp. $5.75.

This book is typical of many of the do it yourself manuals now seen on the newstand. It is as useful and as safe to the average layman as is the wiring diagram showing the untrained how to save money by not hiring an electrician to put in the lights in a new home. The author states that he recognizes some areas not within the province of "Self-Hypnosis." He offers no evidence that the average layman will be able to make this differential diagnosis however.

It is perhaps a minor point but perhaps indicative of the author's lack of general awareness that although he talks of Pavlovian conditioning as a cornerstone of his theory he uses the example of his dog "Duke" to illustrate conditioning in a manner completely inconsistent with Pavlov's meaning of the term.

The only thing to be said in favor of this book is its relative brevity.

Charles Watkins, M. D.

PUBLICATIONS RECEIVED

(Certain ones of these will be selected for review)

Appleton-Century-Crofts, N. Y.: Preventive Pediatrics: Child Health and Development, by Paul A. Harper; The Pathophysiology and Treatment of Body Fluid Disturbances, by Hans G. Keitel, M. D.; Handbook of Pharmacology: The Actions and Uses of Drugs, by Windsor C. Cutting, M. D.

Doubleday & Company, N. Y.: Your Weight and How to Control It, edited by Morris Fishbein, M. D.

Grune & Stratton, N. Y.: Coronary Heart Disease, edited by William Likoff, M. D., and John H. Moyer, M. D., with 108 contributors (The 7th Hahnemann Symposium).

W. B. Saunders Co., Phila.: Surgery, by Richard Warren, M. D. in collaboration with members of The Department of Surgery of the Harvard Medical School; Endocrine and Metabolic Aspects of Gynecology, by Joseph Rogers, M. D.; Medical Laboratory Technology, by Matthew J. Lynch, M. D., Stanley S. Raphael, M. B., Leslie D. Mellor, L.C.S.L.T., Peter D. Spare, F.I.M.L.T., Peter Hills, L.C.S.L.T., and Martin J. H. Inwood, L.C.S.L.T.; Gastroenterology, by Henry L. Bockus, M. D. (2nd edit.).

BY THE BOOK...



PRO-BANTHĪNE®

brand of propantheline bromide

in
- peptic ulcer
- gastritis
- biliary dyskinesia
- spastic colon
- pylorospasm
- functional gastrointestinal disorders

Prompt, positive control of excess gastrointestinal acidity and motility has earned for PRO-BANTHĪNE the widest acceptance as the standard anticholinergic medication.

Authorities in pharmacology and therapeutics recognize the beneficial actions of PRO-BANTHĪNE. Clinicians prescribe it more often than any other drug of its class.

In patients with peptic ulcer or other conditions characterized by hyperfunction of the enteric tract, PRO-BANTHĪNE relieves pain, suppresses excessive secretion and motility, prolongs the neutralizing property of antacids and hastens resolution of the disorder.

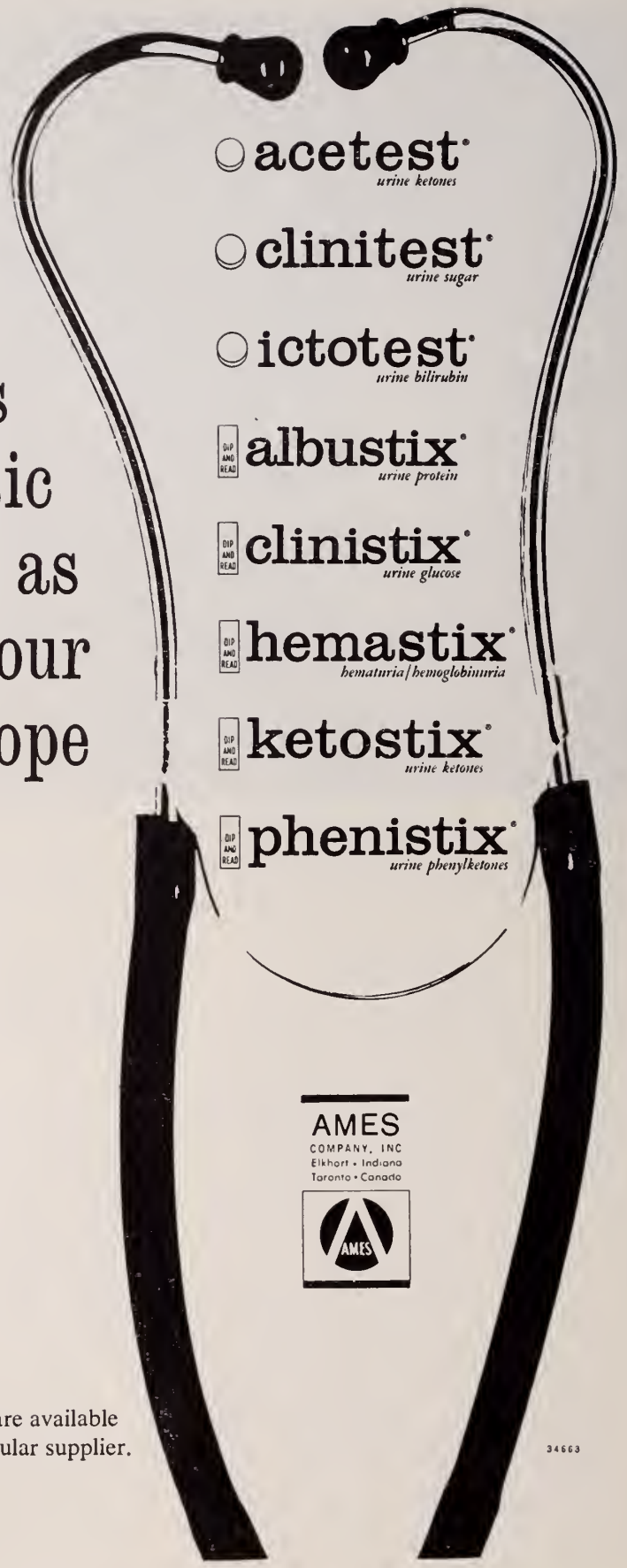
The books say "PRO-BANTHĪNE" when anticholinergic medication is indicated.

PRO-BANTHĪNE is supplied in seven forms and combinations for every clinical need.

PRO-BANTHĪNE Tablets of 15 mg.
PRO-BANTHĪNE Ampuls of 30 mg.
PRO-BANTHĪNE P.A.® (Prolonged Acting) Tablets of 30 mg.
PRO-BANTHĪNE *(Half Strength)* Tablets of 7.5 mg.
PRO-BANTHĪNE® *with* DARTAL® Tablets, containing 15 mg. of PRO-BANTHĪNE and 5 mg. of Dartal (brand of thiopropazate dihydrochloride).
PRO-BANTHĪNE *with* PHENOBARBITAL Tablets, containing 15 mg. of PRO-BANTHĪNE and 15 mg. of phenobarbital.
PROBITALTM Tablets, containing 7.5 mg. of PRO-BANTHĪNE and 15 mg. of phenobarbital.

G. D. SEARLE & CO.
CHICAGO 80, ILLINOIS
Research in the Service of Medicine

urine tests as basic as your stethoscope



acetest
urine ketones

clinitest
urine sugar

ictotest
urine bilirubin

DIP AND READ albustix
urine protein

DIP AND READ clinistix
urine glucose

DIP AND READ hemastix
hematuria/hemoglobinuria

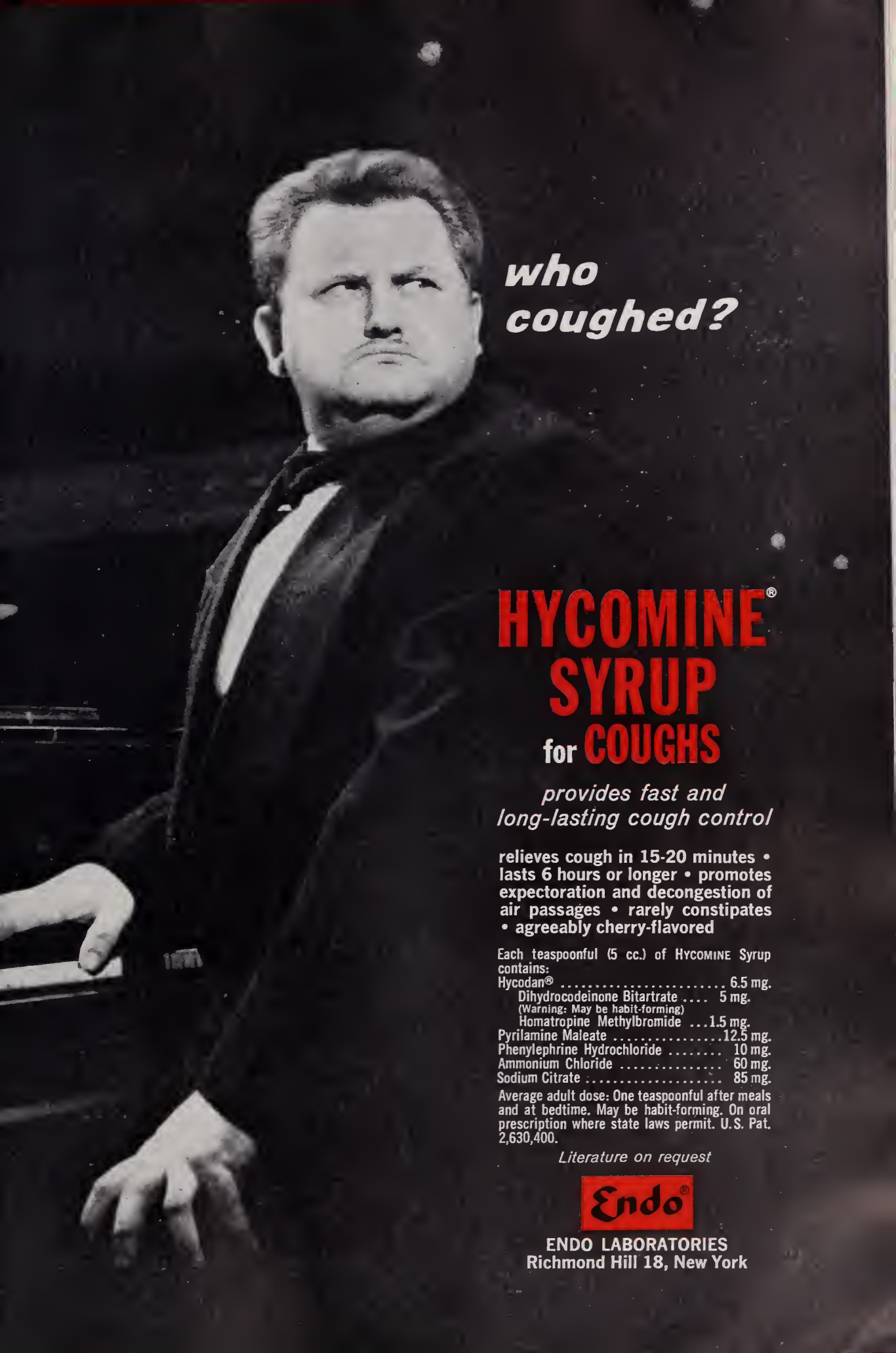
DIP AND READ ketostix
urine ketones

DIP AND READ phenistix
urine phenylketones

AMES
COMPANY, INC
Elkhart • Indiana
Toronto • Canada

AMES products are available through your regular supplier.

34663



who coughed?

HYCOMINE® SYRUP for COUGHS

provides fast and long-lasting cough control

relieves cough in 15-20 minutes • lasts 6 hours or longer • promotes expectoration and decongestion of air passages • rarely constipates • agreeably cherry-flavored

Each teaspoonful (5 cc.) of HYCOMINE Syrup contains:

Hycodan®	6.5 mg.
Dihydrocodeinone Bitartrate	5 mg.
(Warning: May be habit-forming)	
Homatropine Methylbromide	1.5 mg.
Pyrilamine Maleate	12.5 mg.
Phenylephrine Hydrochloride	10 mg.
Ammonium Chloride	60 mg.
Sodium Citrate	85 mg.

Average adult dose: One teaspoonful after meals and at bedtime. May be habit-forming. On oral prescription where state laws permit. U.S. Pat. 2,630,400.

Literature on request

Endo®

ENDO LABORATORIES
Richmond Hill 18, New York

HISTA-VADRIN

when antihistamines alone are not enough



HISTA-VADRIN, an upper respiratory decongestant, is designed for the oral relief of congestion and edema of the upper respiratory passages. The ANTIHISTAMINIC drugs methapyriline and chlor-pheniramine are noted for their ability to prevent vasodilatation and inflammatory edema caused by the release of histamine.

VASOCONSTRICTORS, phenylpropanolamine and phenylephrine oppose mucosal edema by constricting blood vessels which have been dilated by histamine and other factors involved in inflammation. These vasoconstrictors are not as likely to cause excitement or wakefulness as ephedrine or methamphetamine (1).

Indications: For the relief of hay fever, vasomotor rhinitis, and symptoms resulting from upper respiratory infections. Hista-vadrin can afford relief also in other allergic conditions such as urticaria and angioedema.

Each scored Hista-vadrin tablet contains:

Phenylpropanolamine Hydrochloride	40 mg.
Chlor-Pheniramine Maleate	4 mg.
Methapyriline Hydrochloride	40 mg.
Phenylephrine Hydrochloride	5 mg.

Dosage: Adult Dose, 1 tablet every six hours or in accordance with therapeutic response.

Supplied: Slow release scored tablets designed to disintegrate in 2 to 3 hours.

Reference available on request.

Samples and professional literature on request.

HISTA-VADRIN is another "established need" product

First Texas *Pharmaceuticals, Inc.*

DALLAS • ATLANTA • SINCE 1901



Relieves Anxiety and Anxious Depression

The outstanding effectiveness and record of safety with which Miltown relieves anxiety and anxious depression—the type of depression in which either tension or nervousness or insomnia is a prominent symptom – has been clinically authenticated time and again during the past seven years. This, undoubtedly, is one reason why physicians still prescribe meprobamate more often than any other tranquilizer in the world.

Miltown®

meprobamate (Wallace)

Usual dosage: One or two 400 mg. tablets t.i.d.
Supplied: 400 mg. scored tablets, 200 mg. sugar-coated tablets; bottles of 50. Also as MEPROTABS® – 400 mg. *unmarked*, coated tablets; and in *sustained-release* capsules as MEPROSPAN®-400 and MEPROSPAN®-200 (containing respectively 400 mg. and 200 mg. meprobamate).

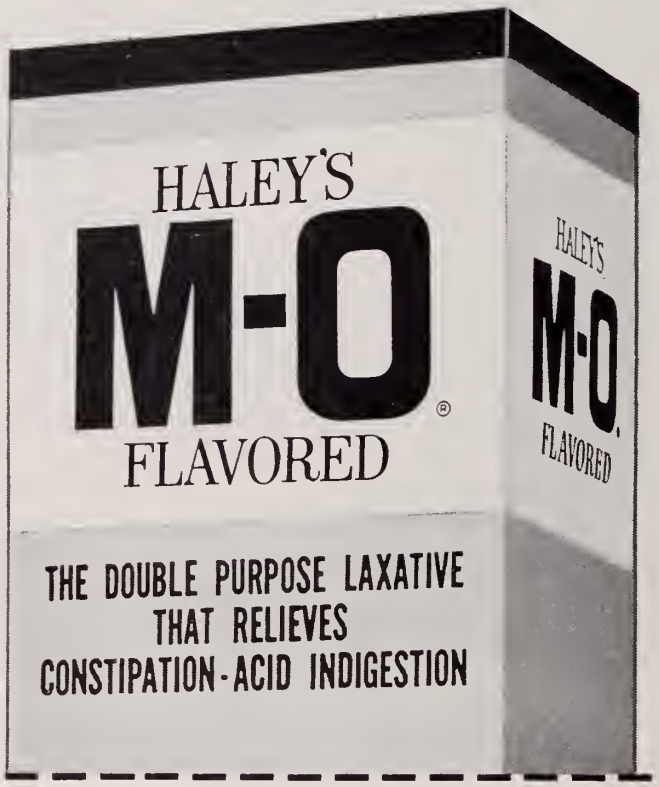
WALLACE LABORATORIES / *Cranbury, N. J.*

Clinically proven in over 750 published studies

1. Acts dependably – without causing ataxia or altering sexual function
2. Does not produce Parkinson-like symptoms or liver damage
3. Does not muddle the mind or impair physical activity

CM-7972

NOW ALSO IN FLAVORED FORM!



BOTTLES OF
4 OZ., 8 OZ.,
1 PT., 1 QT.

Antacid–Laxative–Lubricant to help correct constipation

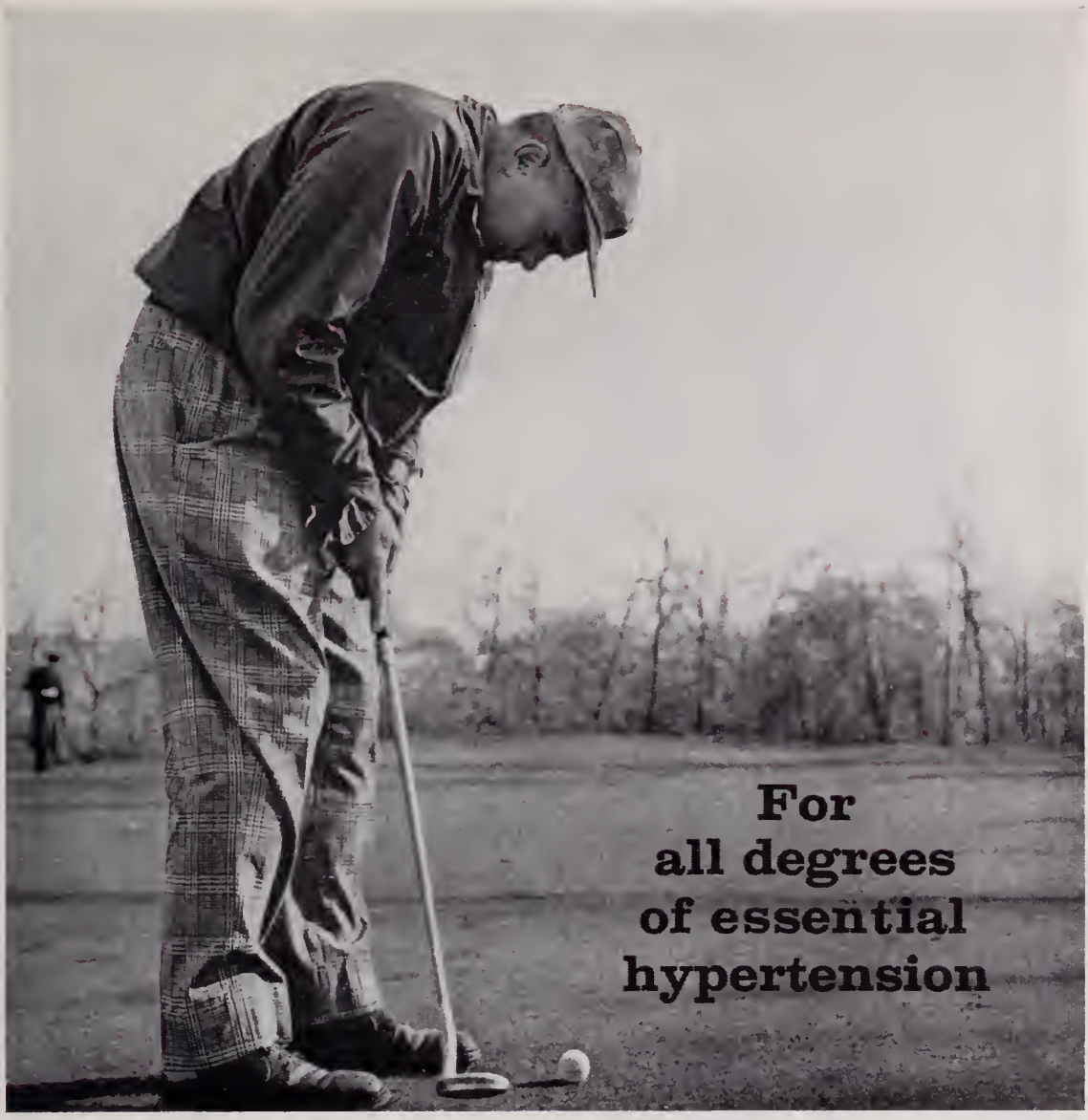
Magnesium Hydroxide plus pure mineral oil make *Haley's M-O* a smooth working antacid-laxative-lubricant that efficaciously relieves constipation and attendant gastric hyperacidity.

The oil globules in *Haley's M-O* are minutely subdivided to assure uniform distribution and thorough mixture with intestinal contents. Oil leakage is thus avoided and a comfortable evacuation is effected through the stimulation of normal intestinal rhythm and blunted defecation reflex.

May we send samples for your evaluation? Just write:

THE CHAS. H. PHILLIPS CO.

Division of Sterling Drug Inc., 1450 Broadway, New York 18, N. Y.



"relief of symptoms is striking with Rautrax-N"†

Rautrax-N decreases blood pressure for almost all patients with mild, moderate or severe essential hypertension. Rautrax-N also offers a new sense of relaxation and well-being in hypertension complicated by anxiety and tension. And in essential hypertension with edema and/or congestive heart failure, Rautrax-N achieves diuresis of sodium and chloride with minimal effects on potassium and other electrolytes.

Rautrax-N combines Raudixin (antihypertensive-tranquilizer) with Naturetin c̄ K (antihypertensive-diuretic) for greater antihypertensive effect and greater effectiveness in relief of hypertensive symptoms than produced by either component alone. Rautrax-N is also flexible (may be prescribed in place of Raudixin or Naturetin c̄ K) and economical (only 1 or 2 tablets for maintenance in most patients).

Supply: Rautrax-N — capsule-shaped tablets providing 50 mg. Raudixin, 4 mg. Naturetin and 400 mg. potassium chloride. *Rautrax-N Modified* — capsule-shaped tablets providing 50 mg. Raudixin, 2 mg. Naturetin and 400 mg. potassium chloride.

†Hutchison J. C.: Current Therap. Res. *2*:487 (Oct.) 1960.

For full information, see your Squibb Product Reference or Product Brief.

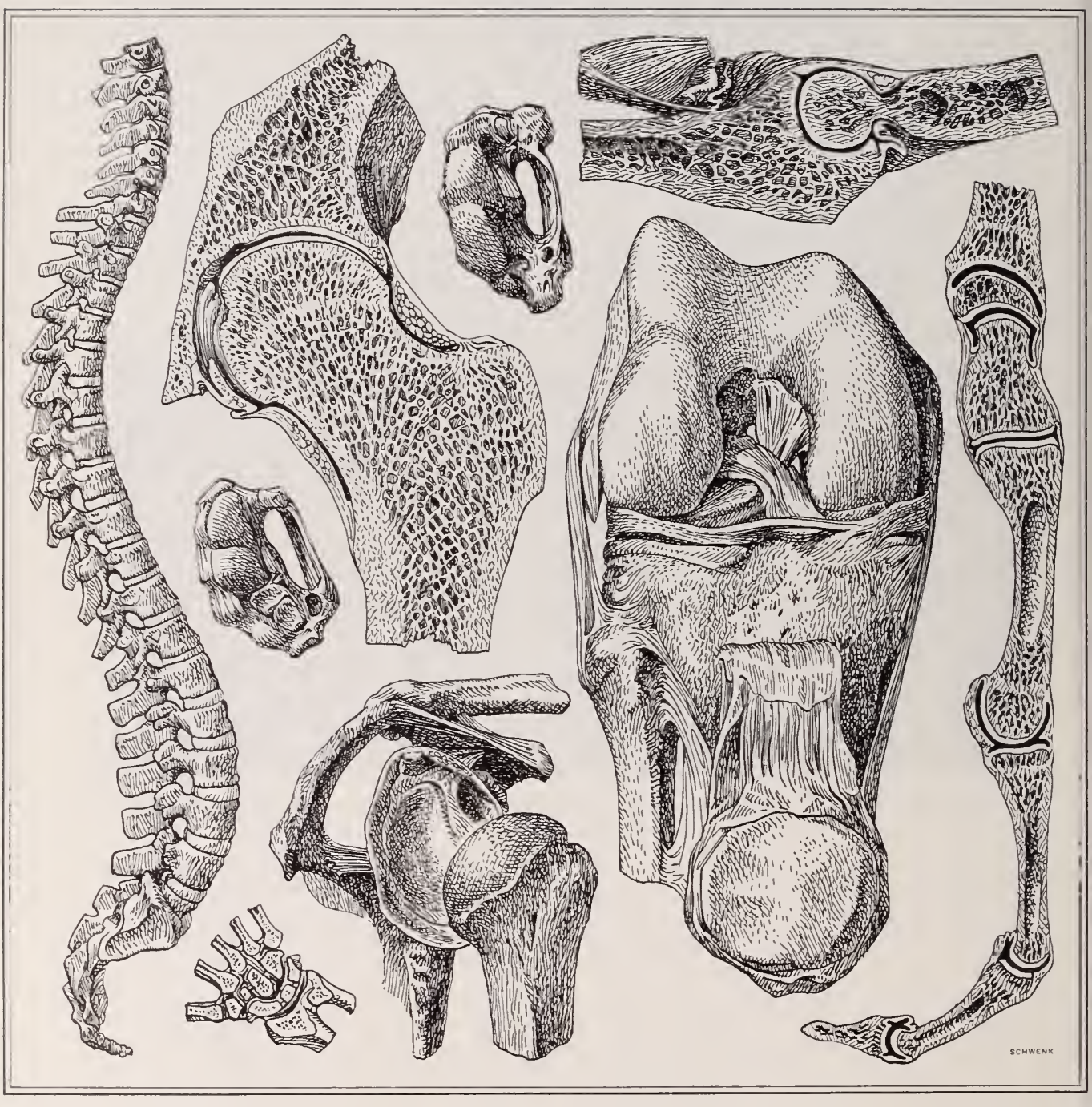
Rautrax-N*

Squibb Standardized Rauwolfia Serpentina Whole Root (Raudixin) and Bendroflumethiazide (*Naturetin) with Potassium Chloride

SQUIBB *Squibb Quality — the Priceless Ingredient*

SQUIBB DIVISION Olin

'RAUDIXIN'®, 'RAUTRAX'®, AND 'NATURETIN'® ARE SQUIBB TRADEMARKS.


SCHWENK

Joint Account

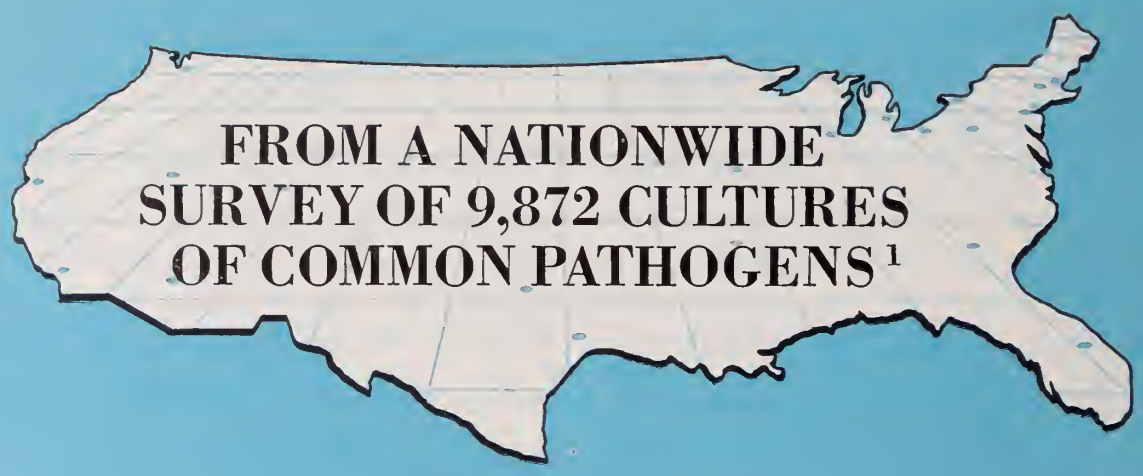
With ARISTOCORT Triamcinolone, patients with rheumatoid arthritis and related disorders of the joints obtain early gratifying relief of pain, swelling, and stiffness of joints, with improved mobility. Yet ARISTOCORT provides symptomatic control with only minimal interference with other metabolic mechanisms. In this respect, ARISTOCORT is unsurpassed, when compared with other corticosteroids, old and new. Typical steroid problems of sodium retention and edema, undesirable euphoria, or voracious appetite and excessive weight gain rarely occur with ARISTOCORT.

Aristocort®
Triamcinolone Lederle

Maximum steroid benefits with minimum steroid penalty

Request complete information on indications, dosage, precautions and contraindications for ARISTOCORT Tablets (1 mg., 2 mg., 4 mg.) from your Lederle representative, or write to Medical Advisory Department.

Lederle LEDERLE LABORATORIES • A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York
163-3



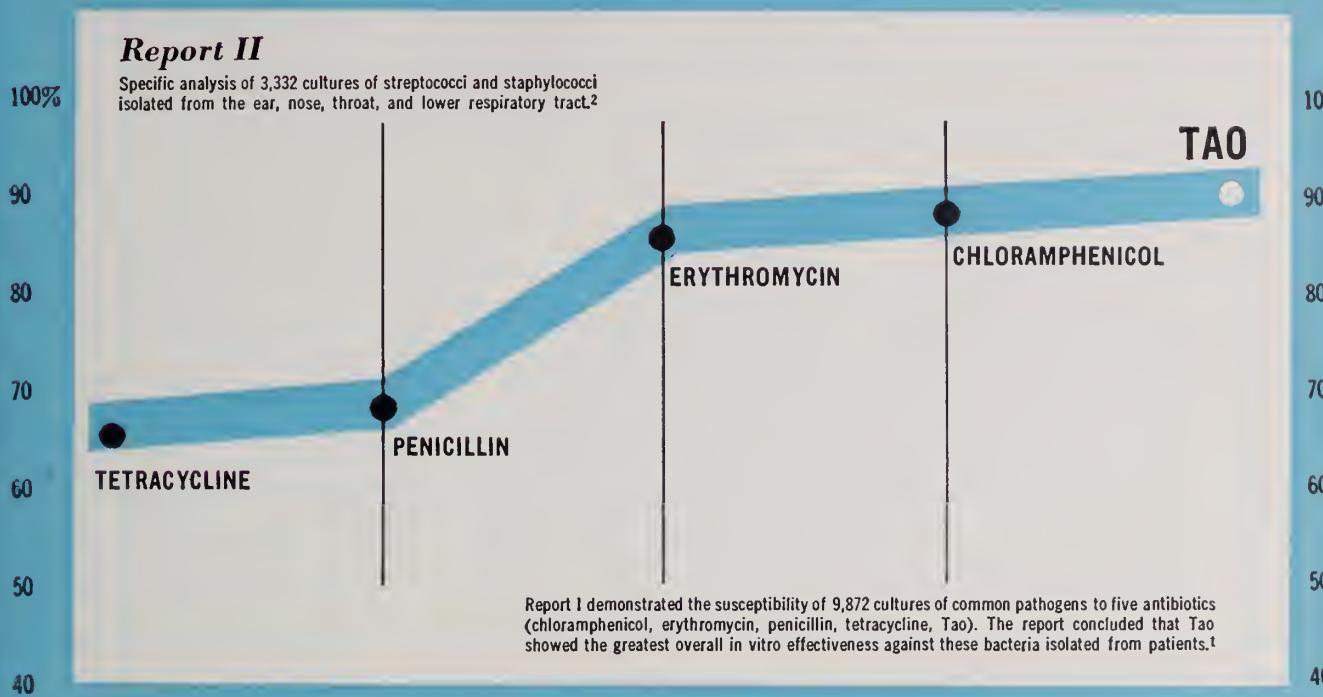
FROM A NATIONWIDE SURVEY OF 9,872 CULTURES OF COMMON PATHOGENS[1]

Conclusions of Nationwide Survey: *Report I*

1. **Even after five years of general use,** Tao, of the antibiotics tested, demonstrated greatest activity against respiratory streptococci and staphylococci (3,332 cultures).

2. **Overall results showed a higher percentage of susceptibility** among these common pathogens to Tao than to the other antibiotics. Susceptibility to Tao was greatest, not only in respiratory streptococci and staphylococci, but also in these organisms isolated from skin and soft tissue (3,423 cultures), genitourinary and gastrointestinal tracts and other sources (2,458 cultures). Susceptibility was equal to all antibiotics tested in pneumococci from unspecified sources (463 cultures), and less to Tao in H. influenzae from unspecified sources (196 cultures).

3. **Tao has been used for five years without development of predictable cross resistance.** In 1958 and 1961, approximately 73% and 70%, respectively, of erythromycin-resistant problem staphylococci showed susceptibility to Tao.[3,4] The present study confirms the continuing high degree of Tao activity even against these pathogens. Of 1,592 cultures of erythromycin-resistant staphylococci, 68% were susceptible to Tao, while in the reverse situation, only 33% of 768 Tao-resistant staphylococci were susceptible to erythromycin.



Report II

Results of Bacterial Susceptibility in 3,332 Respiratory Pathogens

References

1. "Bacterial Susceptibility Patterns: A Geographic Survey." Fowler, J. Ralph, M.D., and Watters, John L., M.D. Scientific Exhibit presented at the Annual Meeting of the American Society of Clinical Pathologists, Chicago, Ill., August 31 to September 9, 1962. 2. Fowler, J. Ralph, Watters, John L. and Levy, Arthur M.: Bacterial Susceptibility Patterns as Related to Geographic Variation and Anatomical Source. In press. 3. English, A. R., and Fink, F. C.: Antibiot. & Chemother. 8:420 (Aug.) 1958. 4. English, A. R., and Fink, F. C.: Antibiot. and Chemother. 11:648 (Oct.) 1961.

New York 17, N. Y.
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being®

If you would like a report of the entire susceptibility study, write Medical Department, J. B. Roerig and Company, 235 E. 42nd St., New York 17, N.Y.

TAO® an antibiotic that time hasn't changed

(troleandomycin)

Capsules · Ready-Mixed Oral Suspension · Pediatric Drops · Parenteral (as oleandomycin phosphate)

Trocinate®

Brand of Thiphenamil HCl.

FOR DIVERTICULITIS, MUCUS COLITIS,

IRRITATIVE DIARRHEA, IRRITATIVE URETERITIS,

BLADDER SPASM

*T*rocinate is a musculotropic antispasmodic with no appreciable anticholinergic action. It relieves spasms of the lower bowel and genito-urinary tract by direct action on the contractile mechanism of smooth muscles. The absence of any appreciable action on the autonomic nervous system eliminates the usual side-effects. It may be safely used in glaucoma. Each tablet contains 100 mgs. Trocinate HCl.

USUAL DOSAGE: 2 tablets, 4 times a day. Maintenance dosage is frequently lower.

Dispensed in bottles of 40 and 250 tablets.

WM. P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA

Manufacturers of ethical pharmaceuticals since 1856



arked improvement in appetite / Measurable weight gain / Notable increase in vigor, strength and sense of well-being

ew anabolic Winstrol combines highest potency* with outstanding lerance in an economical oral tablet. Employed adjunctively, its ysiotonic benefits are evident in the management of a variety of atients: the geriatric; the post-operative; the weak; the debilitated th chronic or malignant disorders. Winstrol reverses tissue-depleting ocesses, restores a positive metabolic balance, rebuilds body tissue hile it builds strength, builds confidence and restores a sense of ell-being.

*ANIMAL DATA

Usual Adult Dose: 1 tablet t.i.d. Before prescribing, consult literature for additional dosage information, possible side effects and contraindications.
Supplied: 2 mg. tablets. Bottles of 100.

With Winstrol, patients look better... feel stronger—because they are stronger!

WINTHROP LABORATORIES, NEW YORK 18, N. Y.

Winthrop

Browne-McHardy Clinics

MAIN CLINIC
3636 St. Charles Ave.
New Orleans 15, La.
TWinbrook 9-2376

GRAVIER ST. DIVISION
630 Gravier St.
New Orleans 12, La.
524-1605

VETERANS HIGHWAY DIVISION
8601 Veterans Memorial Hwy.
Metairie, La.
VErnon 3-7341

INTERNAL MEDICINE
Cardiology
Endocrinology
Gastroenterology
Hematology
Rheumatology

Donovan C. Browne, M. D.
Wiley H. Jenkins, M. D.
Robert C. Judice, M. D.
John T. Leckert, M. D.
G. Gordon McHardy, M. D.
Robert J. McHardy, M. D.
Thomas C. Roach, M. D.
Swan S. Ward, M. D.
George E. Welch, M. D.
Guy T. Williams, M. D

DERMATOLOGY
William Burroughs, M. D.

DISEASES OF THE CHEST
Joseph E. Blum, Jr., M. D.

EAR, NOSE and THROAT
Norma Kearby, M. D.

GENERAL SURGERY
Claude C. Craighead, M. D.
Raul G. Reyes, M. D.

OBSTETRICS and GYNECOLOGY
C. Gordon Johnson, M. D.
Robert I. Ayerst, M. D.
James M. Todd, Jr., M. D.

OPHTHALMOLOGY
Oliver H. Dabezies, M. D.

INDUSTRIAL MEDICINE
Ralph J. McDonough, M. D.
Horace A. Nabers, M. D.

PEDIATRICS
Carl E. Kemmerly, M. D.
Milton H. Donaldson, M. D.

RADIOLOGY and RADIOTHERAPY
Charles O'Dowd Lilly, M. D.
Joseph B. Marino, M. D.
Walter McDowell, M. D.

UROLOGY
John F. Lally, M. D.

AUXILIARY SERVICES
Cytology
Diabetics
Electroencephalograph
Endoscopy
Medical Laboratory
Pharmacy
Physical Therapy
Pulmonary Function Studies

Big Aseptic Advance Comes in a Tiny New Package!

NEW *Curity* WEBCOL ALCOHOL PREPS

One simple little packet now gives you a ready-to-use Alcohol Prep, *guaranteed* sterile. Full effective strength (70% Isopropyl Alcohol) assured; foil-poly-paper packet heat-sealed to prevent deterioration. The only ready-to-use Prep sterilized with ethylene oxide to kill alcohol-resistant spores.

In addition, the new Webcol Alcohol Prep eliminates considerable handling at all levels, eliminates possibility of contamination, saves time and labor. An ideal unit for doctor's bag and emergency kit, too.

Thrifty—no waste due to evaporation . . . no waste from excess saturation.

To prep for an injection in the safest, most convenient and economical way—use new *Curity* Webcol Alcohol Preps.

PEACOCK
SURGICAL COMPANY INC.
1235 TEXAS AVENUE
SHREVEPORT, LOUISIANA



...WITH 'METHEDRINE' SHE CAN HAPPILY REFUSE!



Controls food craving, keeps the reducer happy — In obesity, "our drug of choice has been methedrine . . . because it produces the same central effect with about one-half the dose required with plain amphetamine, because the effect is more prolonged, and because undesirable peripheral effects are significantly minimized or entirely absent." Douglas, H. S.: West.J.Surg. 59:238 (May) 1951.

'METHEDRINE'®

brand Methamphetamine Hydrochloride

Supplied: Tablets 5 mg., scored. Bottles of 100 and 1000.

Literature available on request.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, New York



they never even had a chance to complain about the cost of drugs

Walk through any older cemetery, and you will find the same ugly story repeated many times. Died, age 30 years... died, age 8 years... died, age 6 months.

Sometimes, you will see evidence of entire families being struck down almost simultaneously. You wonder, was it influenza? Diphtheria? Infectious diarrhea? Or a host of other diseases whose very names were synonymous with terror?
You will see, "Died, age 22 – childbirth."

There are many reasons why you don't see a continuation of these tragic stories today – not the least of which has been the dedication of American physicians and the quality of medical education. And another, we sincerely believe, has been the quality of medicines which have been made available.

Yet, the value of independent drug research has been seriously challenged – research which has, in the past 30 years alone, helped to add nearly 10 extra years to the average lifespan in the United States. Yet, because the cost of the search must be reflected in the price the patient pays for a prescription, is it too expensive to continue? Unfortunately, perhaps those who might have the best answer can offer only silent testimony.

This message is brought to you on behalf of the producers of prescription products.

A reproduction, for display in your waiting room, is available. Write:
PHARMACEUTICAL MANUFACTURERS ASSOCIATION • 1411 K STREET, N.W. • WASHINGTON, D.C.



Put your low-back patient back on the payroll

Soma relieves stiffness —stops pain, too

YOUR CONCERN: Rapid relief from pain for your patient. Get him back to his normal activity, fast!

HOW SOMA HELPS: Soma provides direct pain relief while it relaxes muscle spasm.

YOUR RESULTS: With pain relieved, stiffness gone, your patient is soon restored to full activity—often in days instead of weeks.

> Kestler reports in controlled study: *Average time for restoring patients to full activity: with Soma, 11.5 days; without Soma, 41 days. (J.A.M.A. Vol. 172, No. 18, April 30, 1960.)*

Soma is notably safe. Side effects are rare. Drowsiness may occur, but usually only in higher dosages. Soma is available in 350 mg. tablets. **USUAL DOSAGE:** 1 **TABLET Q.I.D.**

The muscle relaxant with an independent pain-relieving action

SOMA®

(carisoprodol, Wallace)

Wallace Laboratories, Cranbury, New Jersey

Digitalis

in its completeness



Each pill is
equivalent to
one USP Digitalis Unit

Physiologically Standardized
therefore always
dependable.

Clinical samples sent to physicians upon request.

Davies, Rose & Co., Ltd.
Boston, 18, Mass.

Invest in the future health of the nation and your profession



Give to medical education through AMA-ERF

To train the doctors of tomorrow, the nation's medical schools must have your help today. It is a physician's unique privilege and responsibility to replenish his own ranks with men educated to the highest possible standards. *Medical education needs your dollars to stay strong. Send your check today!*

AMA-ERF

AMERICAN MEDICAL ASSOCIATION
EDUCATION AND
RESEARCH FOUNDATION

535 North Dearborn St., Chicago 10, Illinois



Flavor you never thought you'd get from any filter cigarette!

You'll never know how satisfying filter smoking can be until you try Tareytons. Fine, flavor-rich tobaccos go into each Tareyton. Then the famous Dual Filter brings out the best taste of these choice tobaccos. Sound too good to be true? Pick up a pack of Tareytons today and see for yourself.

Dual Filter makes the difference

DUAL FILTER Tareyton

Product of The American Tobacco Company — "Tobacco" is our middle name



PSYCHIATRIC HOSPITAL

DAY HOSPITAL

DEPARTMENT OF OUT PATIENT PSYCHIATRY

TIMBERLAWN FOUNDATION
For Education and Research in Psychiatry

Narcotic Cases Not Admitted

TIMBERLAWN
PSYCHIATRIC CENTER

PERRY C. TALKINGTON, M.D.
Psychiatrist In Chief

CHARLES L. BLOSS, M.D.
Medical Director

HOWARD M. BURKETT, M.D.
Clinical Director

DONALD BERTOCH, M.A.
DAVID LIPSHER, Ph.D.
JEAN HUBBARD, B.S.
Clinical Psychology

Associate Psychiatrists
JAMES K. PEDEN, M.D.
WARD G. DIXON, M.D.
JERRY M. LEWIS, M.D.
CLAUDE L. JACKSON, M.D.
E. CLAY GRIFFITH, M.D.
BELVIN A. SIMMONS, M.D.
ALBERT F. RIEDEL, M.D.
JOHN HENRY REITMAN, M.D.

Business Manager
RALPH M. BARNETTE, JR., B.B.A.

BILL M. TURNAGE, M.S.S.W.
ROBERT L. COATES, M.S.S.W.
WELDON EBELING, M.S.S.W.
Social Work

GERALDINE SKINNER, B.S., O.T.R.
Director of Occupational Therapy

LOIS TIMMINS, Ed.D.
Director of Recreational Therapy

FRANCES LUMPKIN, R.N., B.S.
Director of Nurses

EVergreen 1-2121 Dallas 21, Texas P. O. Box 1769

INDEX TO ADVERTISERS

Abbott Laboratories 9, 10
American Tobacco Company 37
Ames Company, Inc. 20

Browne-McHardy Clinics 32
Burroughs Wellcome & Co. 14, 15, 33

Crownsville State Hospital 1

Davies, Rose & Co., Ltd. 36

Endo Laboratories 21

First Texas Pharmaceuticals, Inc. 22

Katz & Besthoff, Ltd. 1

Lederle Laboratories 3, 26, 27
Lilly & Company, Eli Front Cover, 18
Louisiana Coca-Cola Bottling Co. 1
Louisiana State Board of Health Second & Third Covers

Majors Company, J. A. 1

Parke, Davis & Company 4, 5
Peacock Surgical Co., Inc. 32
Pfizer Laboratories 12, 13
Pharmaceutical Manufacturers Association 34
Phillips Co., The Chas. H. 24
Poythress & Company, Inc., Wm. P. 6, 30
Professional Cards 39, 40
Professional Management Service 8

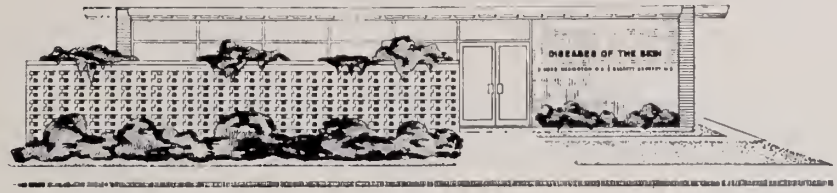
Robins Company, A. H. 7
Roche Laboratories Back Cover
Roerig & Co., Inc., J. B. 28, 29

Searle & Company, G. D. 19
Schering Corporation 17
Smith Kline & French Laboratories 16
Squibb & Sons, E. R. 25

Timberlawn Psychiatric Center 38

Wallace Laboratories 11, 23, 35
Winthrop Laboratories 2, 31

PROFESSIONAL CARDS



Courtesy Parking

Adjacent to Building

BARRETT KENNEDY, M. D.

V. MEDD HENINGTON, M. D

WM. J. PERRET, M. D.
(Associate)

DERMATOLOGY

4522 MAGNOLIA STREET

TWinbrook 1-4452 — 1-4453

Green Clinic

709 South Vienna Street — Ruston, Louisiana

Surgery
Marvin T. Green, M.D.
LaMoyne C. Bleich, M.D.

Obstetrics and Gynecology
Carl L. Langford, M.D.
David M. Hall, M.D.

Pediatrics
Bruce W. Everist, M.D.
O. Wharton Brown, Jr., M.D.

Eye, Ear, Nose and Throat
Harold H. Harms, M.D.

Radiology
M. Ragan Green, M. D.

Internal Medicine
Henry S. Roane, M.D.
Robert W. Sharp, M.D.
Joe L. Smith, Jr., M.D.

Dentistry
L. Felton Green, D.D.S.
Benjamin C. Baugh, D.D.

The Baton Rouge Clinic

134 North 19th St. — DI 8-5361

SURGERY
J. Sabatier, M. D.
Charles Mosely, M. D.
Charles S. Peter, Jr., M. D.

GYNECOLOGY & OBSTETRICS
Melvin Schudmak, M. D.
J. P. Griffon, M. D.
Donald C. Diefendorf, M. D.

UROLOGY
Mortimer Silvey, M. D.

GENERAL PRACTICE
Shirley J. Woodford, M. D.

INTERNAL MEDICINE
Charles Prosser, M. D.
Roger Reynolds, M. D.
(Allergy)
Bruce L. Baer, M. D.
(Gastroenterology)
Douglas Gordon, M. D.
(Endocrinology)
David D. Kahn, M. D.
(Hematology)

EYE
George H. Jones, M. D.

PHILIP RONALD LORIA, M. D.

DISEASES OF THE SKIN

Dermoplaning — **Removal of Excessive Hair**

1104 Maison Blanche Bldg. — New Orleans 16, La.
By Appointment — 524-9621

PROFESSIONAL CARDS

JOHN C. HARDIN, JR.
D.D.S., M.D., F.A.C.S.
Maxillo-Facial & Oral Surgery
(Head and Neck Surgery)
121 Physicians & Surgeons Bldg., West
Phone 3-6901 Shreveport, Louisiana

DR. NATHAN H. POLMER
Physical Medicine—Rehabilitation
2209 Carondelet St.
2 - 5 P. M.
Off.: JA 2-0171 Res.: JA 2-3946

JAMES W. BURKS, JR., M. D.
DISEASES OF THE SKIN
SURGICAL PLANING FOR COSMETIC DEFECTS
FACILITIES FOR REMOVAL OF SUPERFLUOUS HAIR
925 Maison Blanche Bldg.
New Orleans 16, La. 529-3322

DR. R. ROSS, JR.
SKIN DISEASES
802 Pere Marquette Bldg. JA 2-0202

DR. RICHARD W. VINCENT
PLASTIC AND RECONSTRUCTIVE SURGERY
34 Maes Court — Medical Plaza
3600 PRYTANIA STREET
TWinbrook 5-4561

JUSTILLIEN H. FORET, M. D.
Practice Limited to Psychiatry
3706 Prytania Street
899-2618 By Appointment

CHARLES I. BLACK, M. D.
DISEASES OF THE SKIN
4550 North Boulevard DIckens 3-2841
Baton Rouge, Louisiana

Business Management Consultants
for Individual Practices, Groups and Clinics
PROFESSIONAL MANAGEMENT SERVICE
700 Maison Blanche Bldg.
524-1177 New Orleans 16, La.

BLAISE SALATICH, D.D.S., M.D.
PRACTICE LIMITED TO ORTHOPEDIC SURGERY
1212 Maison Blanche Building
JAckson 2-7697 By Appointment

THE OWENS CLINIC
for
PLASTIC AND RECONSTRUCTIVE SURGERY
2223 Carondelet St. New Orleans 13, La.
Telephone: JAckson 2-0106
After Hours — Call Doctors' Exchange WH 5-4141

DR. HARTWIG M. ADLER
EYE, EAR, NOSE AND THROAT
Hours by appointment.
3439 Prytania Street TW. 1-4094
New Orleans

DR. CARL N. WAHL
Practice limited to
MAXILLO-FACIAL AND PLASTIC SURGERY
4500 Magnolia Street 891-6615

FRANK H. MAREK, M. D.
Radiologist
444 So. Ryan Street Lake Charles, La.
Phone HE 3-6361
Practice Limited to
X-ray and Radium Treatment and Diagnosis

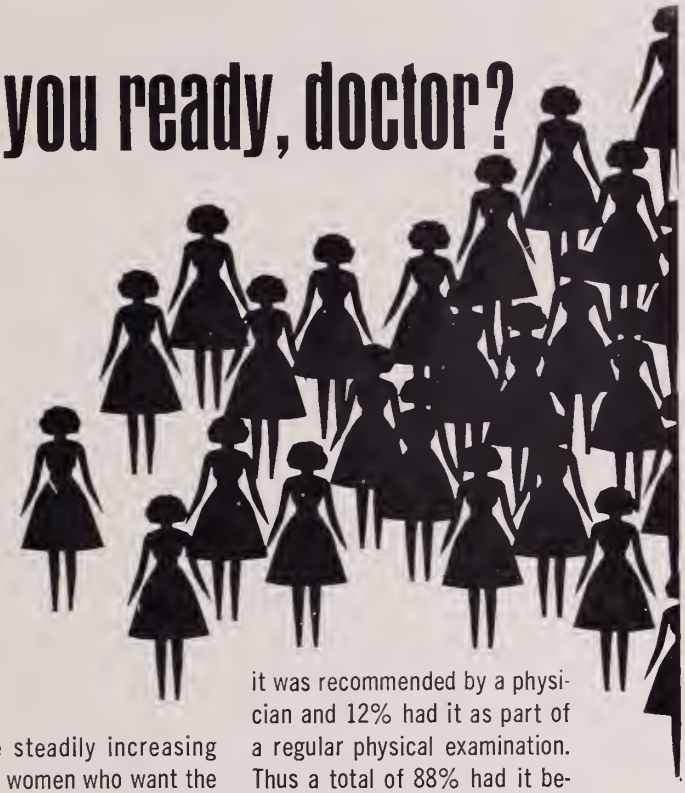
DR. HARRY ZOLLER
HEARING AND DEAFNESS
DISEASES AND SURGERY OF THE EAR
1109 Pere Marquette Building
JA. 5-2535 By Appointment

JOHN H. COUNCE, M. D.
Diseases of the Skin
1413 Delachaise St. New Orleans
Office Hours
By Appointment TW 1-2813

FREDERIC W. BREWER, M. D.
PRACTICE LIMITED TO PSYCHIATRY
1008 Maison Blanche Building
JA 5-4047 By Appointment

The Cancer Commission of the Louisiana State Medical Society

are you ready, doctor?



...for the steadily increasing number of women who want the "Pap" smear as part of their regular checkups? By 1961, the number who had this cytologic examination had climbed to an estimated 10,000,000!

While the American Cancer Society's educational program has succeeded in alerting women to the vital importance of the "Pap" smear, it is the physician who plays the key role. This was confirmed in a recent survey of women who had had the "Pap" smear. It was revealed that 76% had it because it was recommended by a physician and 12% had it as part of a regular physical examination. Thus a total of 88% had it because of physicians' actions.

As the number of uterine cytological examinations rises, the death rate from uterine cancer declines. Many authorities estimate that most deaths from this disease could be eliminated if these examinations were routinely performed. More and more women are ready for it and are willing to budget time and money for it. Are you ready for them, doctor?

AMERICAN CANCER SOCIETY®

LOUISIANA DIVISION, INC.

204 Delta Building New Orleans 12, La.

Louisiana State Board of Health

W. J. REIN, M.D., President

specific for anxiety & tension

Librium

The singular specificity of Librium in controlling anxiety and tension has proven to be an advantage in a wide range of disorders characterized by anxiety of varying degrees. Notably effective in patients whose symptoms are primarily emotional, Librium is equally valuable when organic disease is aggravated or prolonged by accompanying anxiety. Coupled with its effectiveness is an outstanding record of safety. Librium has few, if any, of the unwanted side effects associated with tranquilizers and daytime sedatives—no extrapyramidal effects, no autonomic blocking, and no dulling of mental alertness. Consult literature and dosage information, available on request, before prescribing.

the successor to the tranquilizers

LIBRIUM® Hydrochloride—7-chloro-2-methylamino-5-phenyl-3H-1,4-benzodiazepine 4-oxide hydrochloride



ROCHE

NAL of the LOUISIANA STATE MEDICAL SOCIETY

APRIL, 1963

LOUISIANA STATE MEDICAL SOCIETY

Formerly NEW ORLEANS MEDICAL and SURGICAL JOURNAL
OFFICIAL ORGAN OF THE LOUISIANA STATE MEDICAL SOCIETY

Copyright 1963 by
iana State Medical Society.
0 per annum, 35¢ per copy

Vol. 115, No. 4

Published monthly by
The Journal of the Louisiana State
Medical Society, Inc.
1430 Tulane Ave., New Orleans 12

Contents



The Responsibility of the Electrocardiographer 109
F. Tremaine Billings, Jr., M. D., Nashville, Tennessee

Tularemia: A Perusal of Three Hundred Thirty-Nine Cases 114
F. T. Dienst, Jr., M. D., Shreveport

Relative Clinical Significance of Food Allergies in Pediatric Allergy 128
Albert E. Hensel, Jr., M. D., Alexandria

Injuries to the Urinary Tract 130
J. C. Marshall, M. D., Baton Rouge

Therapy of Peptic Ulcer 136
Thomas C. Roach, M. D., New Orleans

An Evaluation of the Muscle Relaxant Properties of Librium 140
Jack Wickstrom, M. D. and Ray Haddad, M. D., New Orleans

Editorial 146

Organization Section 148

Medical News Section 150

Book Reviews 152

Index to Advertisers 40

TULANE MEDICAL SCHOOL
APR 30 1963
LIBRARY

ANNUAL MEETING—MAY 6-8, 1963—NEW ORLEANS

ASTHMA—
A CLASSIC INDICATION FOR HALDRONE®
(paramethasone acetate, Lilly)

Haldrone produces rapid remission of the symptoms of asthma and controls the patient over extended periods with relative freedom from side-effects. In recommended dosage, Haldrone is unlikely to cause sodium retention and has little or no effect on potassium excretion.

Suggested daily dosage for asthma:
Initial suppressive dose 6-12 mg.
Maintenance dose 2-6 mg.
Supplied in bottles of 30, 100, and 500 tablets: 1 mg., Yellow (scored), and 2 mg., Orange (scored).

This is a reminder advertisement. For adequate information for use, please consult manufacturer's literature. Eli Lilly and Company, Indianapolis 6, Indiana. 240120

Lilly

Second Class Mail Privileges Authorized at New Orleans, Louisiana

MENINGITIS

Meningococcal meningitis is raising its ugly head again. Although this dreaded disease is no longer the threat it once was, yet there were 65 cases reported in 1961 throughout Louisiana, 9 of which resulted in death. Last year there were 76 cases, with 20 deaths. During the first two and one-half months of this current year, 24 cases have already been reported.

We would do well to maintain a constant alert for this infectious disease, to ensure early diagnosis and prophylactic chemo- or antibiotic therapy for all contacts.



Louisiana State Board of Health

W. J. REIN, M.D.

President



BOTTLED UNDER AUTHORITY OF THE COCA-COLA COMPANY BY
THE LOUISIANA COCA-COLA BOTTLING CO., LTD.



You Know--

that we know!

TRUSTED MANY MILLIONS OF TIMES

GOOD DRUG STORES ONLY THE BEST
Katz & Besthoff, Inc.

Prescription Headquarters Since 1905

MEDICAL BOOKS

Of All Publishers

Any book on Medicine, Surgery, and Nursing

J. A. MAJORS COMPANY

147 South Liberty St.

NEW ORLEANS 12, LA.

——Catalogs cheerfully sent upon request——

WANTED

Young general practitioner to join two other G. P.'s and surgeon in suburb of Dallas, Texas. Attractive working conditions, good town, schools, and churches. Salary at first with partnership eventually. No investment required. Contact Geo. W. Apple, Jr., M. D., P. O. Box 158, Plano, Texas.





For dramatic restoration

WINSTROL®

brand of STANOZOLOL

Oral anabolic therapy with the new physiotonic WINSTROL results in the restoration of the patient's positive protein metabolism; confidence, alertness and sense of well-being.

WINSTROL combines highest potency* with outstanding tolerance, stimulates appetite and promotes weight gain... restores a positive metabolic balance. WINSTROL reverses the catabolic effects of concomitant corticosteroid or ACTH therapy. WINSTROL rebuilds body tissue while it builds strength, confidence and a sense of well-being.

Dosage: Usual adult dose, I tablet t.i.d. before or with meals; young women, I tablet b.i.d.; children from 6 to 12 years, up to I tablet t.i.d.; children under 6 years, ½ tablet b.i.d. Available as scored tablets of 2 mg. in bottles of 100. For best results, administer Winstrol with a high protein diet.

Side Effects and Precautions: Prolonged administration can produce mild hirsutism, acne or voice change. In an occasional patient, edema has been observed and in young women the menstrual periods have been milder and shorter. These side effects are reversible. In patients with impaired cardiac and renal function, there is the possibility of sodium and water retention. Liver function tests may reveal an increase in bromsulphalein retention, particularly in elderly patients. In such cases, therapy should be discontinued. Although Winstrol has been used in patients with cancer of the prostate, its mild androgenic activity is considered by some investigators to be a contraindication.

With Winstrol, patients look better ...feel stronger—because they are stronger!

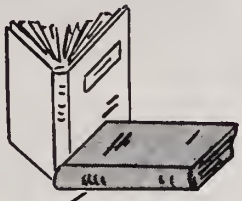
*ANIMAL DATA

Winthrop

Winthrop Laboratories, New York 18, New York

SAUNDERS BOOKS

Valuable to the Physician



New (2nd) Edition!

Nadas — Pediatric Cardiology

Here is penetrating insight into the differences and peculiarities of diagnosis and treatment of heart disease in children as opposed to adults. Primary emphasis is on effective office management. Topics range from *angiocardiography* to *anesthesia for children with heart disease*. Differential diagnosis of murmurs is extensively covered. For such disorders as acute rheumatic fever, atrial septal defects, etc., you'll find details on: *incidence, anatomy, physiology, pathology, clinical picture, course and prognosis, differential diagnosis,* plus every aspect of *treatment*. For this *New (2nd) Edition* recent refinements in diagnostic techniques are fully covered. Revised criteria for surgical intervention and recently developed surgical techniques are presented. New, improved electrocardiograms are included among the new illustrations.

By Alexander S. Nadas, M.D., F.A.C.P., Assistant Clinical Professor of Pediatrics, Harvard Medical School; Cardiologist, The Children's Hospital; Physician, Sharon Cardiovascular Unit, Children's Medical Center, Boston. About 768 pages, 6⅜″ x 9¾″, with about 529 figures. About $16.00. *New (2nd) Edition—Ready May 1*

New (2nd) Edition!

Hinshaw and Garland — Diseases of the Chest

In this fully revised *New (2nd) Edition*, chest diseases are presented concisely and understandably to give you thorough step-by-step details of management. Under each disease the authors discuss: *background, incidence, statistical distribution, diagnosis, symptoms, pathology and classification, radiologic appearance, treatment and prognosis.* Important sections cover topics ranging from *bronchial asthma, bacterial and viral pneumonia, etc., to foreign bodies in the larynx and tracheobronchial tree, and coccidioidomycosis.* In this new edition you'll find a completely new section on *Pulmonary Function* and a marked expansion of the material on *Carcinoma of the Lung.* Many new chest films have been added. Chapters on *bronchitis* and *emphysema* are extensively re-written and expanded. The entire book is up-dated throughout.

By H. Corwin Hinshaw, M.D., Ph.D., D.Sc., Clinical Professor of Medicine; and L. Henry Garland, M.B., B.Ch., MD., Clinical Professor of Radiology, University of California School of Medicine, San Francisco. About 800 pages, 7″ x 10″, with about 650 illustrations on 312 figures. About $20.00. *New (2nd) Edition—Ready May 1*

New (2nd) Edition!

Reed — Counseling in Medical Genetics

This up-to-date *New (2nd) Edition* is packed with specific answers for the questions your patients ask you about heredity. Thousands of physicians profited from the first edition of Dr. Reed's book. He gives you concise facts on the chances of a disease or abnormality being transmitted from parent to child. Almost every chapter is devoted to a common genetic problem.

You'll find lucid advice on the problems of *mental retardation, mongolism, club foot, obesity, convulsive seizures, the schizophrenias, harelip and cleft palate, the central nervous system syndrome, disputed paternity, allergies, genetic effects of radiations, heart diseases, skin color, etc.* Illustrative examples show how the information is used in actual practice. They show types of requests for genetic information which have come to the author from agencies, physicians, parents, etc. The reply given to the questioner and the follow-up information obtained later is included.

Major attention is paid to diseases or abnormalities that appear with a frequency of better than one in 1,000 births. The Appendix lists practically all traits that may be transmitted to children. Dr. Reed gives a reference for each one—usually the most recent authoritative article known to him. You'll find listings of such traits as: *adrenal hyperplasia—Dandy-Walker syndrome—pancreatitis—retinal aplasia—Wilms' tumor—etc.*

Recent advances in the area of medical genetics have required a complete rewriting for this revision. New chapters cover *Cancers, The Chromosome Breakthrough,* and the *Environment.* The wealth of counseling experience available to the author has grown to over 2500 "cases," all handled at the Dight Institute for Human Genetics.

By Sheldon C. Reed, Ph.D., Director, Dight Institute for Human Genetics, The University of Minnesota. 278 pages, 5¾″ x 8″. About $5.50. *New (2nd) Edition—Just Ready!*

To Order Mail Coupon Below!

W. B. SAUNDERS COMPANY
West Washington Square Philadelphia 5

Please send when ready and bill me:

☐ Reed—*Counseling in Medical Genetics*.....About $5.50

☐ Hinshaw & Garland—*Diseases of the Chest*.....About $20.00

☐ Nadas—*Pediatric Cardiology*.....About $16.00

Name.....

Address.....

SJG 4-63

in severe respiratory infections
refractory to other measures..

CHLOROMYCETIN®

(chloramphenicol, Parke-Davis)

for established clinical efficacy against susceptible organisms[1-14]



In Friedlander's Pneumonia[3,13]

Although the prognosis in Friedlander's pneumonia is poor, treatment with CHLOROMYCETIN has shown a good response when susceptible strains of *Klebsiella pneumoniae* are incriminated.

In *Hemophilus Influenzae* Pneumonia[3,4,13,14]

Because the invading organism is usually sensitive to CHLOROMYCETIN, this agent is generally effective in pneumonias caused by *H. influenzae*.

In Staphylococcal Pneumonia[1-8,13]

CHLOROMYCETIN continues to remain effective against many resistant strains of staphylococci, and—alone or in combination with other antibiotics—should be considered when other antistaphylococcal drugs are ineffective.

In Acute Epiglottitis[4,10,11]

This condition is most often caused by *H. influenzae*, most strains of which are sensitive to CHLOROMYCETIN. Therapy should be instituted at once, since the disease may progress from the first symptoms to a severe respiratory obstruction in four to six hours.

In Pneumonias Due to Gram-negative Bacilli[9]

Because of its broad-spectrum activity, CHLOROMYCETIN is often effective in pneumonias caused by sensitive strains of *Aerobacter, Proteus* of various species, *Paracolobactrum,* and other gram-negative pathogens encountered with increasing frequency in serious respiratory tract infections.

In Staphylococcal Empyema[12]

The infiltrating lesions of staphylococcal empyema are often difficult to eradicate. While CHLOROMYCETIN should only be used when the infection has been resistant to treatment with other antistaphylococcal drugs, therapy with CHLOROMYCETIN, in conjunction with surgical procedures, will often bring favorable results.

CHLOROMYCETIN (chloramphenicol, Parke-Davis) is available in various forms, including Kapseals® of 250 mg., in bottles of 16 and 100. See package insert for details of administration and dosage.

Warning: Serious and even fatal blood dyscrasias (aplastic anemia, hypoplastic anemia, thrombocytopenia, granulocytopenia) are known to occur after the administration of chloramphenicol. Blood dyscrasias have occurred after both short-term and prolonged therapy with this drug. Bearing in mind the possibility that such reactions may occur, chloramphenicol should be used only for serious infections caused by organisms which are susceptible to its antibacterial effects. Chloramphenicol should not be used when other less potentially dangerous agents will be effective, or in the treatment of trivial infections such as colds, influenza, or viral infections of the throat, or as a prophylactic agent.

Precautions: It is essential that adequate blood studies be made during treatment with the drug. While blood studies may detect early peripheral blood changes, such as leukopenia or granulocytopenia, before they become irreversible, such studies cannot be relied upon to detect bone marrow depression prior to development of aplastic anemia.

References: (1) Thacher, H. C., & Fishman, L.: *J. Maine M. A.* **52**:84, 1961. (2) Hopkins, E. W.: *Postgrad. Med.* **29**:451, 1961. (3) Hall, W. H.: *M. Clin. North America* **43**:191, 1959. (4) Krugman, S.: *Pediat. Clin. North America* **8**:1199, 1961. (5) Ede, S.; Davis, G. M., & Holmes, F. H.: *J.A.M.A.* **170**:638, 1959. (6) Wolfsohn, A. W.: *Connecticut Med.* **22**:769, 1958. (7) Calvy, G. L.: *New England J. Med.* **259**:532, 1958. (8) Hendren, W. H., III, & Haggerty, R. J.: *J.A.M.A.* **168**:6, 1958. (9) Cutts, M.: *Rhode Island M. J.* **43**:388, 1960. (10) Berman, W. E., & Holtzman, A. E.: *California Med.* **92**:339, 1960. (11) Vetto, R. R.: *J.A.M.A.* **173**:990, 1960. (12) Sia, C. C. J., & Brainard, S. C.: *Hawaii M. J.* **17**:339, 1958. (13) Rosenthal, I. M.: *GP* **17**:77 (March) 1958. (14) Gaisford, W.: *Brit. M. J.* **1**:230, 1959.

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit 32, Michigan

03863

Solfoton®

for mild, continuous sedation

Each tablet (or capsule) contains 16 mg. phenobarbital blended with 65 mg. Bensulfoid®. The Bensulfoid is an inert diluent present to permit slow absorption of the phenobarbital. The usual dosage is one tablet or capsule after meals and at bedtime. Solfoton is especially adapted to prolonged use because of its virtual freedom from depression and other side effects. Contra-indications: identical to those of ¼ gr. phenobarbital.

REFER TO PDR

Poythress, White Section, Page 808 (1963 edition) and Product Identification Section

COMPLETE INFORMATION AND CLINICAL SAMPLES SENT UPON REQUEST

Dispensed in bottles of 100 and 500 tablets or capsules

WM. P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA

Manufacturers of ethical pharmaceuticals since 1856



Put your low-back patient back on the payroll

Soma relieves stiffness —stops pain, too

YOUR CONCERN: Rapid relief from pain for your patient. Get him back to his normal activity, fast!

HOW SOMA HELPS: Soma provides direct pain relief while it relaxes muscle spasm.

YOUR RESULTS: With pain relieved, stiffness gone, your patient is soon restored to full activity—often in days instead of weeks.

Kestler reports in controlled study: *Average time for restoring patients to full activity: with Soma, 11.5 days; without Soma, 41 days.* (*J.A.M.A. Vol. 172, No. 18, April 30, 1960.*)

Soma is notably safe. Side effects are rare. Drowsiness may occur, but usually only in higher dosages. Soma is available in 350 mg. tablets. **USUAL DOSAGE: 1 TABLET Q.I.D.**

The muscle relaxant with an independent pain-relieving action

SOMA®

(carisoprodol, Wallace)

Wallace Laboratories, Cranbury, New Jersey

PROFESSIONAL MANAGEMENT SERVICE CAN HELP YOU BE A

FULL-TIME DOCTOR



Delegation of time-consuming work not requiring your training and experience releases you to more productive and rewarding work only you can do. The Professional Management Service is equipped to save you time . . . to relieve you and your staff of both menial and critical business tasks . . . and to increase your income. Our service offers you the benefits of specially trained, and equipped personnel under the careful supervision of specialists in medical business management, however you maintain complete control of your business activities!

We Offer These Services -

ACCOUNTS RECEIVABLE MANAGEMENT Professional Management Service trained bookkeepers, electric equipment and modern, proven-in-use methods designed to the needs of medical accounts are used to minimize the business workload in your office. Professional, accurate, itemized statements encourage prompt payment. This service pays big dividends in good will, time savings and net dollar return.

CONSULTATION Professional Management Service also includes special services, as needed, such as counseling on all insurance, investments, office personnel, fees, office lay-out, etc.

BASIC BOOKKEEPING SERVICE Formal accounting records are maintained by Professional Management Service. This includes income and expenses, depreciation, capital accounts, monthly financial report and tax return preparation.

PRE-COLLECTION PROGRAM A constructve approach to slow-paying accounts, subject to your control, this service is used with the ARM Service, above, or to supplement billing by your own staff. Custom designed to your needs and policies, but all time-consuming work is done by Professional Management Service.

COMPREHENSIVE BUSINESS SERVICE Most beneficial to physicians is the assumption of the complete business side of practice by the Professional Management Service in a co-ordinated, comprehensive service encompassing all functions named above.



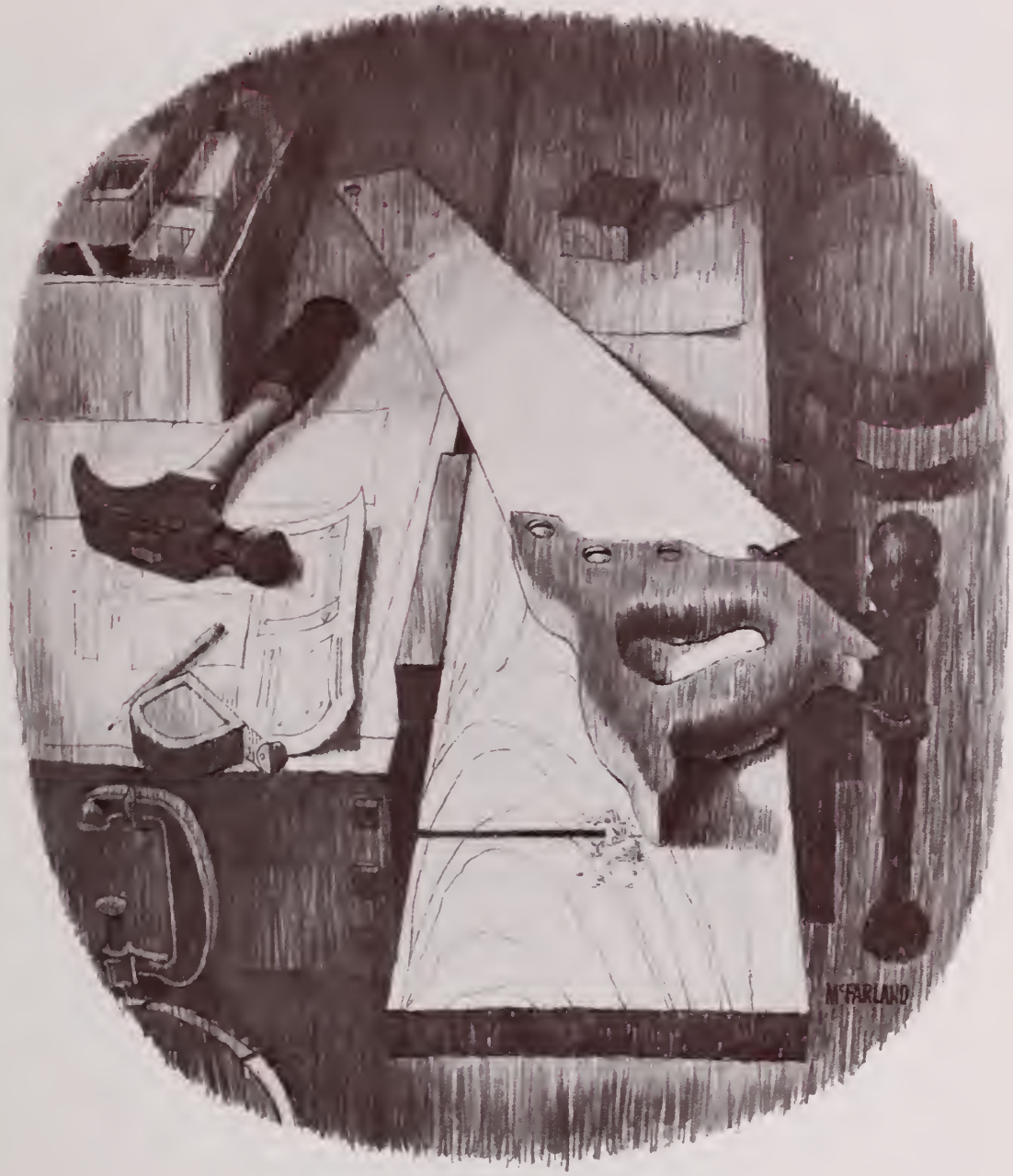
PROFESSIONAL MANAGEMENT SERVICE

New Orleans, Louisiana

700 MAISON BLANCHE BLDG., PHONE 524 1177

A Specialized Service . . . Exclusively Professional

why let antihistamine drowsiness leave the job half-done?



It makes good sense to start your *active* allergy patients on Dimetane Extentabs. The response of a Dimetane-treated patient is eloquent proof that a *potent* antihistamine doesn't have to be a sedative, too. Most types of allergies respond quickly — most patients become symptom-free *and* stay on the job for Dimetane works with a very low incidence of significant side effects. Indeed, as one double-blind crossover study revealed, *with no greater incidence of sedation than placebo.** Also available as conventional tablets, 4 mg.; Elixir, 2 mg./5 cc.; Injectable, 10 mg./cc. or 100 mg./cc.

*Schiller, I.W. and Lowell, F.C.: New England J. Med. 261:478, 1959. A. H. ROBINS CO., INC., RICHMOND 20, VIRGINIA

CONTINUOUS ACTION UP TO 10-12 HOURS

Dimetane® Extentabs®

(brompheniramine maleate, 12 mg.)

UNSURPASSED RELIEF OF ALLERGY SYMPTOMS
...WITH NO MORE SEDATION THAN PLACEBO*

in duodenal ulcer therapy



To dramatize the healing of peptic ulcer, our photographer burned a "lesion" into crumpled metal with a blowtorch, then repaired it and photographed the result.

solid results!

This is the kind of response you can expect with Robinul therapy.

Because Robinul's anticholinergic action is so specific, so intense, and so consistent, it provides a favorable internal environment for ulcer healing.

Positive suppression of gastric acid volume. Moeller[1] demonstrated that 2 mg. of Robinul decreases the volume of HCl secreted by 73% within one hour and 85% within two. Epstein[2] described Robinul's "intensive antisecretory action" as "exemplary."

Significant increase in gastric pH. In his studies comparing the effect of anticholinergics on gastric pH, Sun[3] found that the optimum effective dose of Robinul "... produced suppression of gastric acidity to pH 4.5 or higher in all 16 patients examined." Posey[4] reported "an excellent reduction of gastric acidity ... in 12 of 15 patients...."

Desirable antimotility effect. Young and Sun[5] found that although Robinul (given subcutaneously) demonstrated its ability to suppress antral motility, a 2 mg. oral dose "did not affect gastric emptying or intestinal transit time" in six patients with duodenal ulcer.

New freedom from side effects. Robinul has shown that an anticholinergic need not be plagued with a high percentage of side effects. Of 1705 patients in clinical investigations, many of whom were studied on above-normal doses, fewer than 7% experienced side effects of a moderate-to-severe degree, with only 3% requesting discontinuance of the medication.

PRESCRIBING INFORMATION:

Robinul and Robinul-PH have provided good to excellent results in 83.1% of 795 reported cases of peptic ulcer.

SIDE EFFECTS: Dryness of mouth, blurred vision, urinary difficulties, and constipation are seldom troublesome and may generally be controlled by reduction of dosage. Other unwanted effects such as rash have been reported, but only very rarely.

PRECAUTIONS: Administer with care to patients with incipient glaucoma. Contraindicated in acute glaucoma, prostatic hypertrophy, and in presence of urinary bladder neck obstruction or pyloric obstruction or stenosis with significant gastric retention. Robinul-PH is contraindicated in patients sensitive to phenobarbital or with advanced hepatic or renal disease.

REFERENCES: 1. Moeller, H.C.: Ann. New York Acad. Sc. 99:158, Feb. 28, 1962. 2. Epstein, J. H.: Am. J. Gastroent. 37:295, 1962. 3. Sun, D. C. H.: Ann. New York Acad. Sc. 99:153, Feb. 28, 1962. 4. Posey, E. L., Jr.: Am. J. Digest. Dis. 7:863, 1962. 5. Young, R., and Sun, D. C. H.: Ann. New York Acad. Sc. 99:174, Feb. 28, 1962.

A. H. Robins Co., Inc. Richmond 20, Virginia

Robinul®

ANTICHOLINERGIC

Brand of glycopyrrolate,* 1 mg. per tablet

Robinul®-PH

ANTICHOLINERGIC/SEDATIVE

Glycopyrrolate, 1 mg., and phenobarbital, ¼ gr. per tablet

*U. S. PATENT NUMBER 2,956,062

from sodoku in India



to pharyngitis in Louisiana

there is a world of experience behind BRAND OF OXYTETRACYCLINE **Terramycin**®

Whether treating sodoku or a host of other infections, physicians throughout the world continue to rely on TERRAMYCIN for its outstanding safety, effectiveness and excellent tolerability. Not a single case of phototoxic reaction, blood dyscrasia or neurologic disturbance directly attributable to TERRAMYCIN has been reported in more than 3,000 clinical papers in the last 12 years. *In your practice, the next infection you see will very likely be "Terra-responsive."*

Sodoku is a synonym for the type of rat-bite fever occurring in the heavily populated Far East. The causative organism is *Spirillum minus,** a flagellated spirochete easily identified in dark-field preparations by its quick, darting motility. Besides the bandicoot,* indigenous to India and Ceylon, other rodents, ferrets and cats spread the disease. During the incubation period, which lasts from five to sixty days, the bite wound* heals, only to become inflamed and edematous with the onset of the acute stage. Fever, malaise, and a characteristic purplish maculopapular rash mark the eruption of the disease. Without treatment, relapses may recur periodically for four to six weeks.

**illustrated*

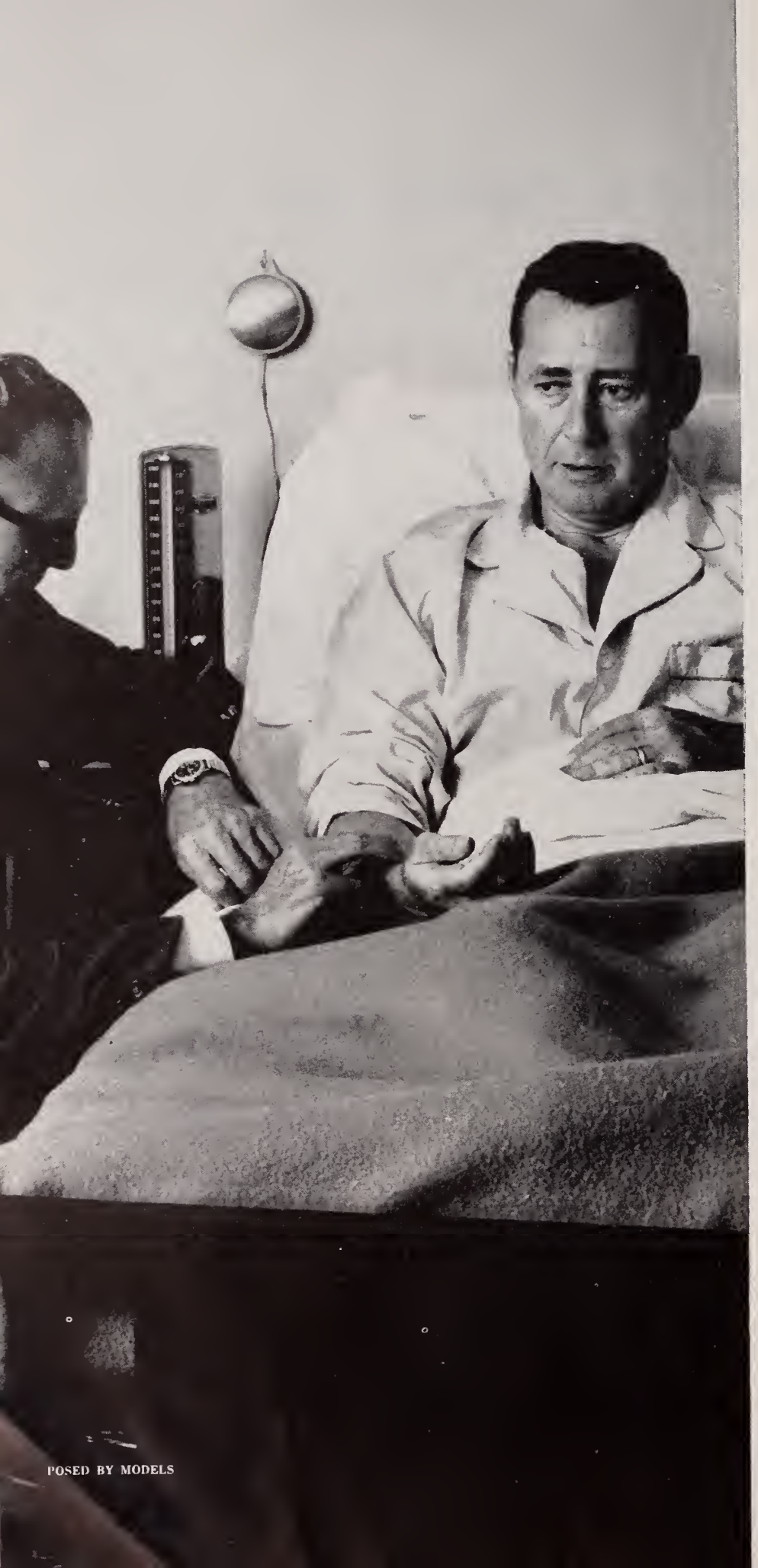
IN BRIEF The dependability of Terramycin in daily practice is based on its broad range of antimicrobial effectiveness, excellent toleration, and low toxicity. As with other broad-spectrum antibiotics, overgrowth of nonsusceptible organisms may develop. If this occurs, discontinue the medication and institute appropriate specific therapy as indicated by susceptibility testing. Glossitis and allergic reactions to Terramycin are rare. For complete information on Terramycin dosage, administration, and precautions, consult package insert before using. *More detailed professional information available on request.*

Science for the world's well-being®

Pfizer

PFIZER LABORATORIES Division, Chas. Pfizer & Co., Inc.
New York 17, New York





POSED BY MODELS

IO



all things considered

in bronchitis—Considering the pattern of mixed bacteria, localized or diffuse involvement, potential underlying disease, and the need to allay symptoms and ease respiratory/cardiac function... physicians often include DECLOMYCIN demethylchlortetracycline in the course of therapy.

DECLOMYCIN produces activity levels higher than those of other tetracyclines... at lower dosage... and maintains them during the entire course of treatment without significant fluctuation.

This activity is prolonged 24 to 48 hours after the last dose, helping to protect against relapse.

Over the wide range of everyday infections—respiratory, urinary and most others—in the young and the aged—the acutely or chronically afflicted—DECLOMYCIN provides the "extra dimension" in broad spectrum control.

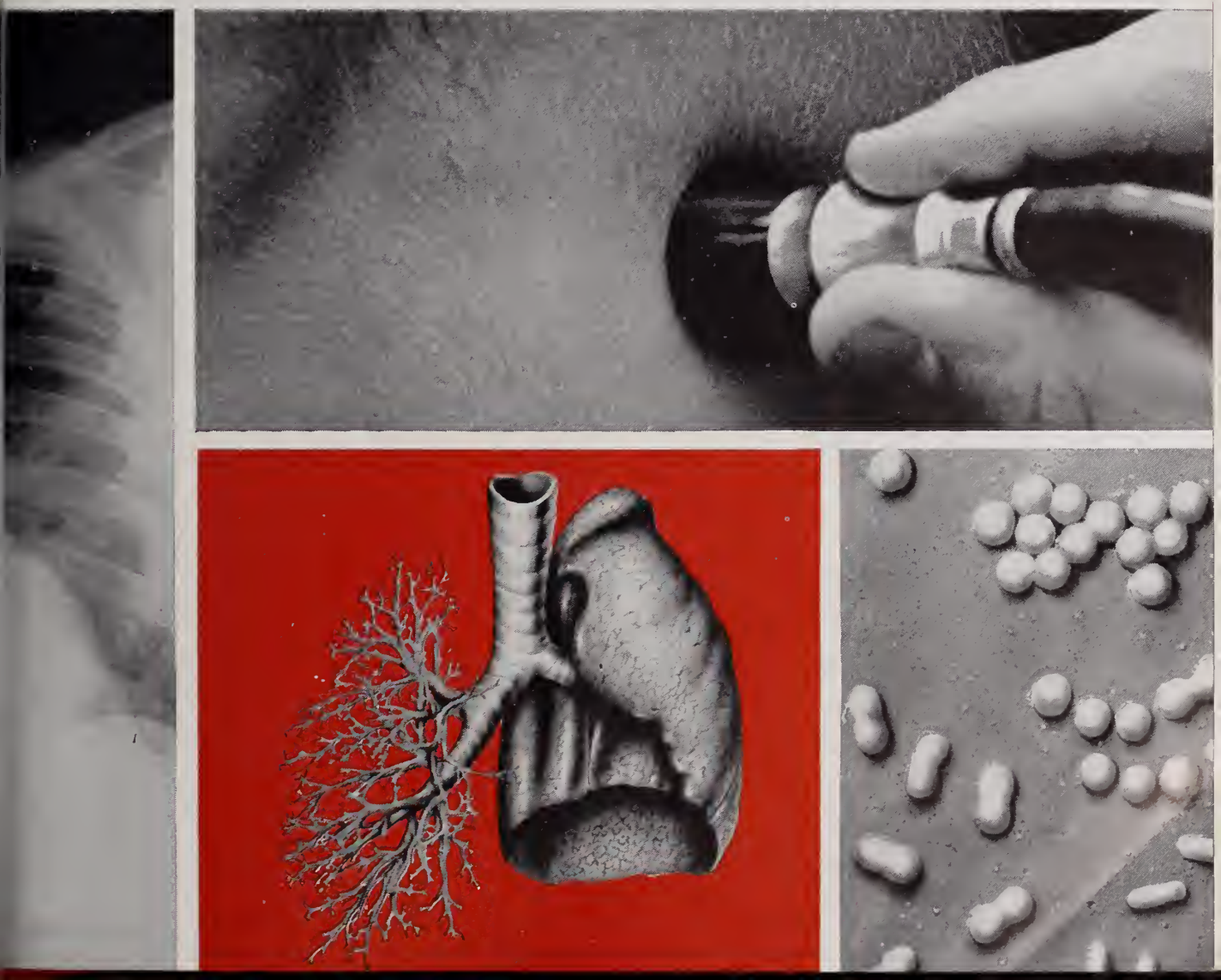
the decision is for

For *adults: Capsules*, 150 mg. and 75 mg. For *children:* cherry-flavored *Pediatric Drops*, 60 mg./cc., and cherry-flavored *Syrup*, 75 mg./5 cc. Request complete information on indications, dosage, precautions and contraindications from your Lederle representative, or write to Medical Advisory Department.

DECLOMYCIN®

DEMETHYLCHLORTETRACYCLINE LEDERLE

LEDERLE LABORATORIES • A Division of AMERICAN CYANAMID COMPANY • Pearl River, N. Y.



Thorazine® is not an analgesic
brand of chlorpromazine

but it can help you relieve the suffering of your patient in PAIN . . .

by reducing the anxiety and fear that intensify pain

by potentiating analgesics—enabling you to reduce narcotic dosage by 50 to 75%

and by controlling nausea and vomiting.

'Thorazine' is particularly useful in the severe pain seen in your cancer, surgical, and obstetrical patients. It is available in a wide variety of dosage forms, including injection, Spansule® sustained release capsules, suppositories, syrup and tablets.

For prescribing information, please see *PDR* or SK&F literature.

SK&F *Smith Kline & French Laboratories*

Photograph professionally posed.



advancing
or complicated hypertension responds to

new Naquival®

brand of trichlormethiazide and reserpine

with STEP-BY-STEP reduction (no sudden drops[1-4]) of elevated blood pressure ☐ relief of associated headache,[3,4] dizziness,[2-4] edema,[2-5] anxiety and tension[1] ☐ simplified dosage (twice daily)...long-term economy

(With new NAQUIVAL there are no reported toxic effects,[2-5] side effects are minor and infrequent,[1-5] and salt restriction[1,5] or added potassium[1] is rarely needed.)

Supplied: NAQUIVAL Tablets, containing 4 mg. trichlormethiazide and 0.1 mg. reserpine, bottles of 100.

References: (1) Ernst, E. M.: Current Therap. Res. 3:167, 1961. (2) Starling, R. J.: J.M.A. Georgia 50:442, 1961. (3) Sprogis, G. R.: Current Therap. Res. 3:393, 1961. (4) Coffee, H. L.: Clin. Med. 69:1561, 1962. (5) Mattey, W. E.: Indust. Med. 31:33, 1962.

Schering

mild
or moderate hypertension responds to

Naqua®

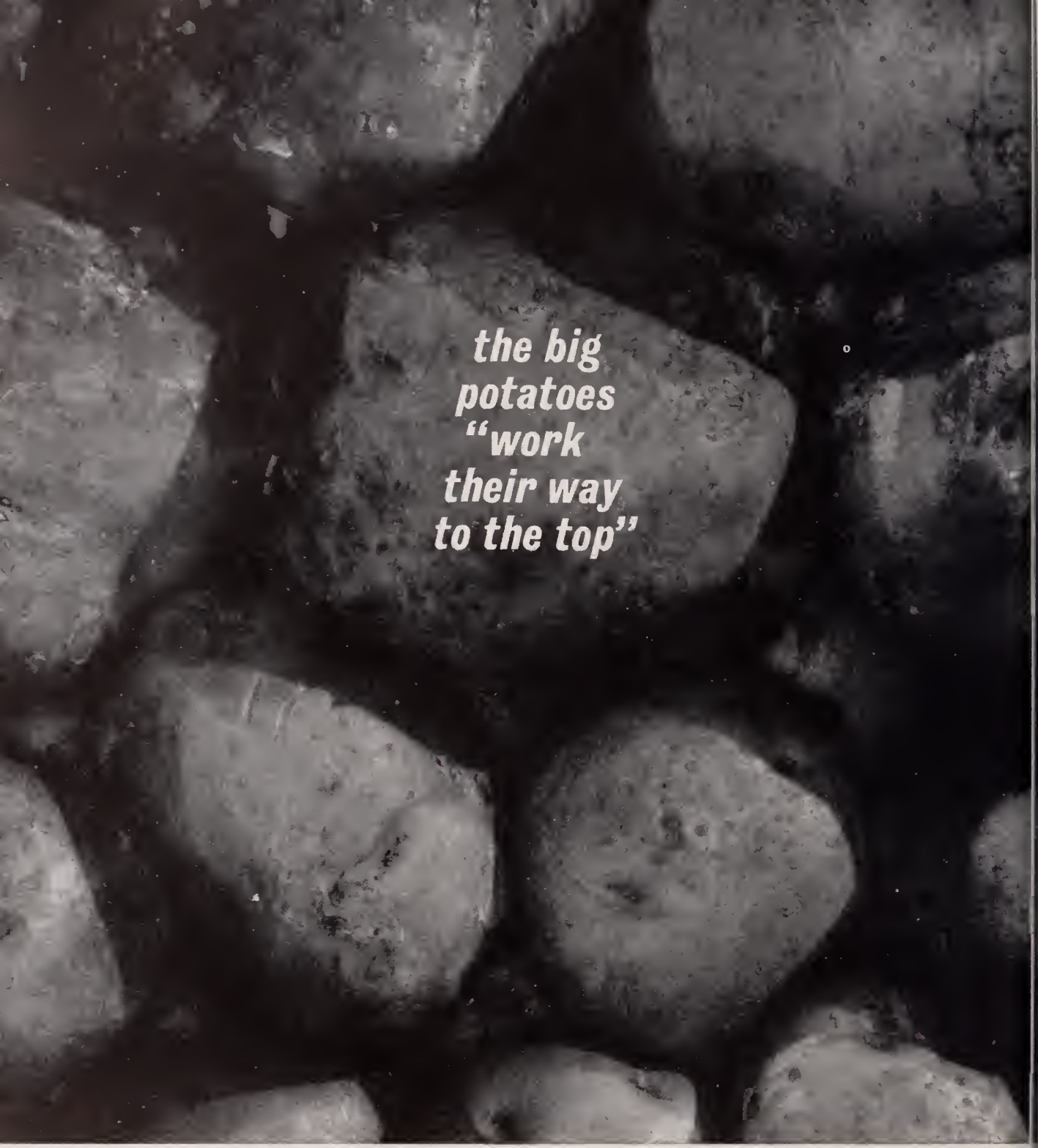
brand of trichlormethiazide

Reduces elevated blood pressure while providing symptomatic relief...permits more normal activities...liberalizes salt intake...in severe hypertension, potentiates other antihypertensives...as a diuretic, controls edema with minimal, once-daily dosage.

Supplied: NAQUA Tablets, 2 and 4 mg., scored, bottles of 100 and 1000.

For complete details concerning NAQUIVAL and NAQUA, consult Schering literature available from your Schering Representative or Medical Services Department, Schering Corporation, Bloomfield, N. J.

S 160



Jostle a peck of potatoes long enough and the little ones will fall to the bottom; the big ones work their way to the top. So do the larger particles of an admixture of powdered chemicals. Unless steps are taken to keep particle sizes uniform, the active ingredients will not be evenly dispersed throughout an excipient. That is why Lilly pharmaceutical chemists establish precise specifications; maintain rigid controls. A few more steps are added and the cost is slightly increased, but priceless uniformity is assured in the finished product.

Eli Lilly and Company • *Indianapolis 6, Indiana, U. S. A.*

Lilly

390024

The Journal

of the

Louisiana State Medical Society

$4.00 Per Annum, 35c Per Copy
Vol. 115, No. 4

APRIL, 1963

Published Monthly
1430 Tulane Avenue, New Orleans 12, La.

The Responsibility of the Electrocardiographer*

• Accurate interpretation of the electrocardiogram is most important and the use of information from the tracing imposes upon the electrocardiographer a burden of trust and responsibility.

F. TREMAINE BILLINGS, JR., M. D.†
Nashville

WHEN in 1903, Wilhelm Einthoven, Professor of Physiology at the University of Leyden, described the use of the string galvanometer to demonstrate the relation of the mechanical and electric phenomena of muscle contraction, he was interested merely in an electromyogram as a means of studying the true nature of muscular contraction, and of measuring the relatively weak electric current developed by all contracting muscle. In 1924, he summarized his studies in a Harvey Lecture devoted to an elucidation of his observations with special reference to cardiac muscle. He called attention to abnormalities of cardiac rhythm and abnormal muscle contraction which confirmed and were confirmed by the concurrent observations of Sir James MacKenzie and Sir Thomas Lewis. He gave no hint, however, that he could foresee the overwhelming use and abuse of the electronic descendants of the string galvanometer. Einthoven's ingenuity combined the necessary knowledge of physics and physiology which made possible the portrayal graphically of the aberrations and idiosyncracies of normal and abnormal muscle action.

Importance of Electrocardiogram

The science of electrocardiography has now attained a position which commands confidence and trust. Indeed, in the hands of a physician competent to read the tracings it is a superb tool, helpful when needed, but not overbearing or threatening in mien. To the uninitiated, electrocardiograms have become, even as we know more and more of their significance, something to be conjured with, and the electrocardiographer a seer who may guide the destinies of man. Even to the expert, the fascinating tracings on paper can be heady stuff, allowing him quite brashly to read these tracings and to make pronounce-

* Presented at the Eighty-second Annual Meeting of the Louisiana State Medical Society, May 9, 1962, Monroe.

† From the Department of Medicine, Vanderbilt University School of Medicine, Nashville, Tennessee.

Aided by the John B. Howe Medical Research Fund.

ments about the patient's condition without paying careful heed to the status of the patient himself.

There are several very basic circumstances in which the electrocardiogram is of fundamental importance, and in which only through its proper interpretation can a final and conclusive diagnosis be made. I will enumerate these conditions quickly before getting on with the more perplexing subtleties of the philosophy of the use of the electrocardiogram.

1. Cardiac arrhythmias and the varieties of conduction abnormalities.
2. Structural abnormalities of the heart:
 a) Myocardial infarct with concomitant necrosis; coronary artery insufficiency.
 b) Right and left axis deviation as indication of ventricular hypertrophy and strain pattern.
3. Pericarditis and constrictive pericarditis.
4. Myocarditis and diseases of the myocardium.
5. Pulmonary embolism.
6. Effects of cardiac drugs and electrolyte abnormalities.

The tracings associated with these conditions are characteristic, and for the most part are subject to straightforward interpretation.

It can be truly said, however, that the use of the information revealed by the electrocardiogram, and the determination of its application to the management of the patient, pose the most difficult problems faced by the physician. A mature physician is guided but not coerced by laboratory findings. This should specially be true of electrocardiograms. The tracings present factual data, but this information can be properly utilized only with attention to the overall condition, both physical and psychological, of the patient and the many varied considerations which this implies. In general the person best qualified to interpret the electrocardiogram is the physician caring for the patient.

Problems of Electrocardiography

It is appropriate to illustrate how an electrocardiogram can raise varied difficulties, philosophic problems and questions of ethical responsibility, when related to the management of a patient.

1. An internist is frequently called upon to decide whether a patient presents a favourable surgical risk. Characteristic of such a consultation is the usual assurance by the surgeon that the electrocardiogram has been ordered. Presumably this implies that the tracing is all that is needed. It should be apparent at the outset that an examination of the patient with a careful history is essential for a decision, if such a decision regarding surgical risk can be accurately made by any means.

The electrocardiogram may or may not be helpful.

Figure 1 is a tracing of a 65 year old man in excellent health with a history of a myocardial infarction three years previously. He was vigorously active without symptoms. In spite of this abnormal tracing, there seemed to be minimal risk. His gall bladder was uneventfully removed.

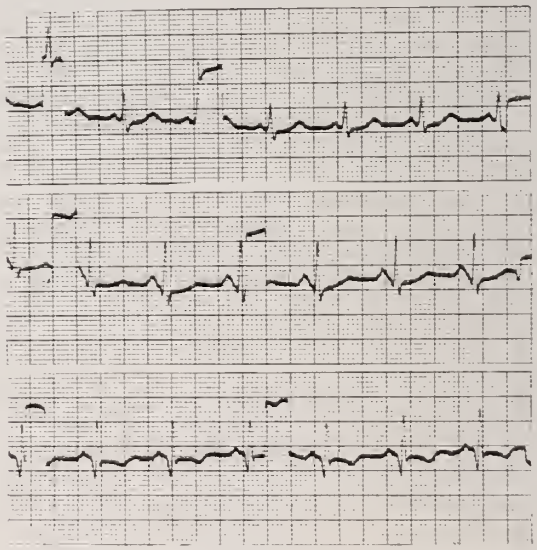


Figure 1. Preoperative tracing, leads 1, 2, and 3, of a 65 year old man who had had a posterior myocardial infarction.

2. The second illustration demonstrates a typical problem raised by a routine electrocardiogram obtained at the time of a routine physical examination. A nervous

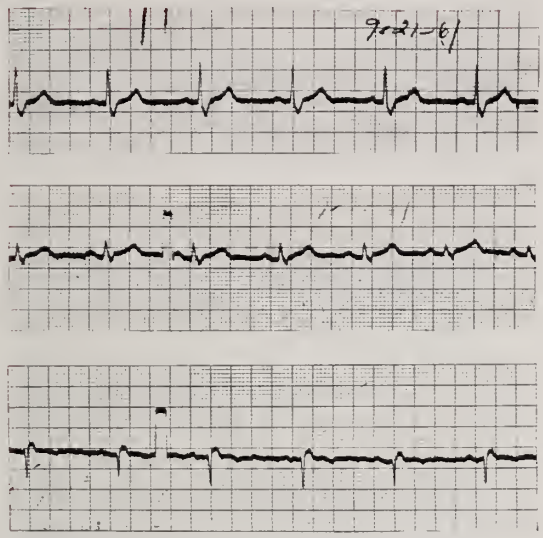


Figure 2. Tracing of a 39 year old man showing bundle branch block. The patient was perfectly healthy. Leads 1, 2 and 3.

frightened 39 year old white man who is still alive and healthy, was seen sixteen years ago a few weeks after the sudden cardiac deaths of two brothers a little older than he. Careful evaluation of his general condition revealed no abnormality, but the electrocardiogram showed a right bundle block, Figure 2. Should he have been told about this finding at once? What about the additional fear and the development of invalidism? Of course he was told at once, and an explanation of the probable lack of serious risk related to this finding was undertaken. He was obviously shocked but his confidence in the physician was maintained, and when later he made an effort to obtain life insurance, he was not so ignorant as to be surprised when his premiums were outrageously increased.

3. Occasional difficult decisions in management arise in the patient with a myocardial infarction complicated by socioeconomic problems. Without question, ideal treatment usually includes early almost complete rest. Unusual circumstances sometimes make it wiser to limit ideal management. Figure 3 is the tracing of a 45 year old silver engraver who developed a typical infarction, fulfilling all clinical criteria, at the beginning of the Christmas season. Such a craftsman often depends heavily on this season for the majority of his income. He and his wife were taken completely into the physician's confidence, the situation was fully

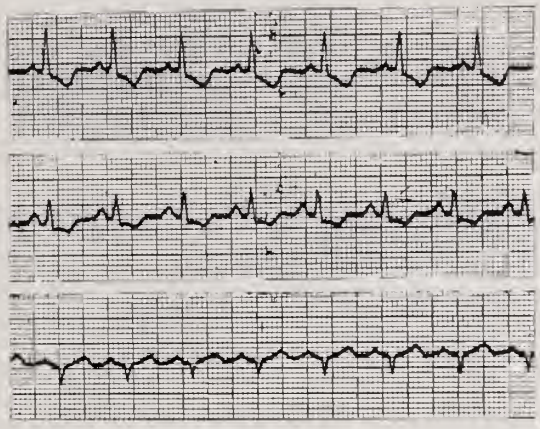


Figure 3. Tracing of a 45 year old man, leads 1, 2 and 3. This patient was allowed to pursue a sedentary occupation while a posterolateral myocardial infarction developed and evolved.

explained to them while he was allowed to continue a steady if slightly modulated work load. The infarct healed uninterruptedly.

4. Not infrequently electrocardiograms repeatedly and irregularly recorded from time to time reveal the presence of intermittent coronary artery insufficiency. Figures 4 and 5 represent the tracings of a patient 68 years old with this condition. He was asymptomatic except for mild an-

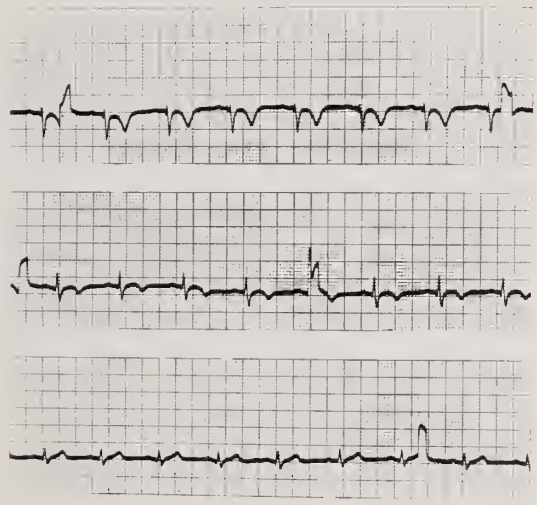


Figure 4. Tracing of a 65 year old man, leads V2, 3 and 4, showing myocardial ischaemia.

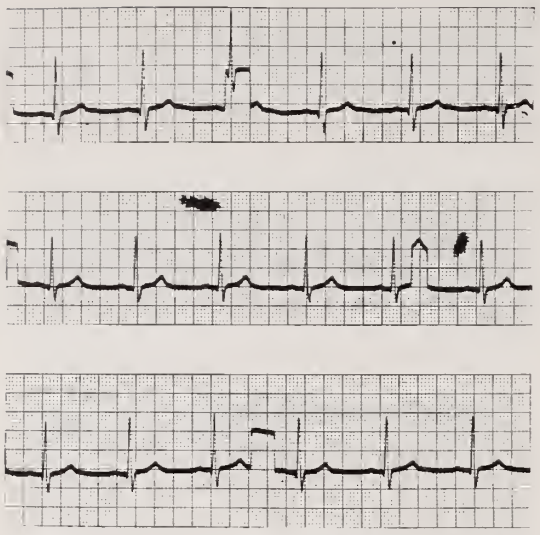


Figure 5. Tracing of the same patient at a later date. Between episodes of myocardial ischaemia, he was encouraged to pursue a normal life.

gina pectoris. This changing electrocardiographic pattern was observed over a period of six years. He was an indefatigable sight-seeing traveller. He knew the condition of his coronary arteries in so far as this could be explained to him, and chose to continue his peripatetic activities. After encircling the world, and journying to Africa and South America on different occasions, he finally dropped dead, aged 74, in Jugoslavia on a trip behind the Iron Curtain. The electrocardiogram was potentially but happily not a deterrent.

5. Interpretation of an electrocardiogram should rarely be the final factor influencing employability. Figure 6 shows the tracing of a 52 year old production line worker. He was and had been completely without symptoms. The electrocardiogram was taken during the course of a routine physical examination. It presented evidence, which persisted without variation, of marked myocardial damage. The physical examination was normal but for moderate cardiac enlargement. His job was light, monotonous and undemanding. He continued to perform it without difficulty.

6. The final problem relates to the philosophic question raised by the "routine executive physical examination". Figure

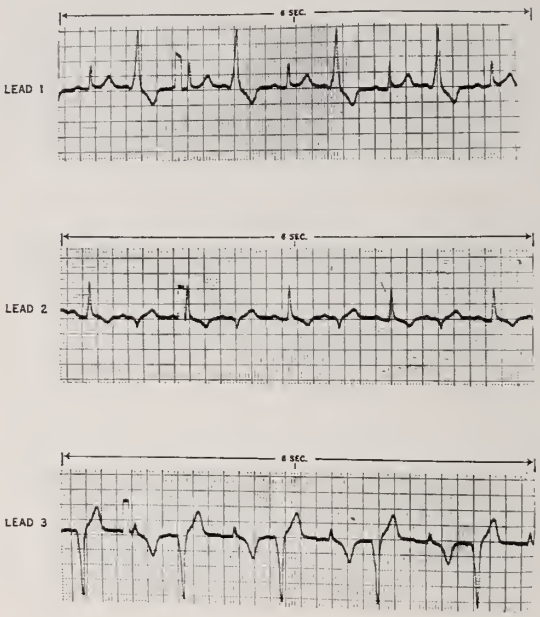


Figure 6. Tracing of a 52 year old man with marked myocardial damage and coupling showing Wolff-Parkinson-White phenomenon, leads 1, 2 and 3. He was allowed to work at a sedentary occupation.

7 shows the tracing of a capable 43 year old executive sent by his company for a careful evaluation of his general physical condition. His father had died at 50 years of age, his daughter had suddenly died at the age of 18. He himself had always been

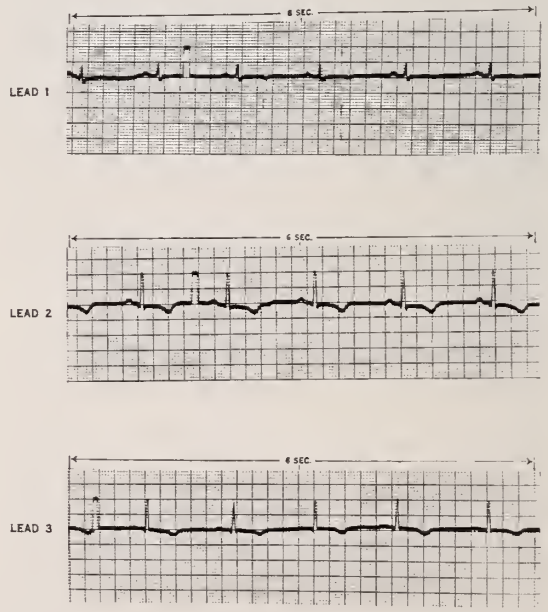


Figure 7. Tracing of a 43 year old executive, leads 1, 2 and 3. Routine examination, asymptomatic with family history of sudden death.

athletic and healthy. It is apparent that the electrocardiogram is abnormal. With this information available, his employers might be tempted to delay or completely block further promotion. A physician's first and sole responsibility is to his patient. This is true regardless of how the patient happens to have come under his care. A patient must have full knowledge of the data obtained from this type of examination, should understand the implications involved, and should give his specific permission for the release of such information to any third party.

Summary

The use of the electrocardiogram imposes a serious responsibility upon the physician who depends upon this diagnostic aid for the proper management of his patients' and their problems. He must not only be accurate in the technical interpretation of the tracings, but above all he must be prepared to make proper use philosophically and ethically of the information thus released to him.

References

1. Einthoven, Wilhelm: The Relation of Mechanical and Electrical Phenomena of Muscular Contraction with Special Reference to Cardiac Muscle. Harvey Lecture 1924-25.

2. Lewis, Sir Thomas: Clinical Disorders of the Heart Beat. Shaw and Sons, London, 7th Edition 1933.

3. MacKenzie, Sir James: Diseases of the Heart. Oxford Medical Publications, 4th Edition, 1925.

The Tragic Day of Hasty Legislation

It would be a tragic day for the people of this country if, through the enactment of hasty legislation, the incentives for drug research would be removed. We still have a lot of work to do—cancer, arthritis, heart disease, special problems of aging—and the pharmaceutical industry is ready to play its part. But we are, after all, companies which have to show a profit or we cease to exist. We are not going to get much return, if any, if we are going to be required to turn over to others the research discoveries which we paid for with large investments of funds and more important investments of intelligence, imagination and the plain hard work of every employee.—Address by T. F. Davies Haines, President, CIBA Pharmaceutical Company, Summit, New Jersey, May 25, 1962.

Tularemia
A Perusal of Three Hundred Thirty-Nine Cases

• A review of 339 cases of tularemia is given. The entity is discussed in its various types.

F. T. DIENST, JR., M. D.*
Shreveport

Introduction and History

TULAREMIA is an acute infectious disease of endemic nature that has been recognized for approximately 50 years. Musser relates a personal letter by Martin as early as 1907 in which is described 5 cases, in three the eye was involved. The first published case was made by Pearse in 1911.[1, 47] Other reports contend that the first known human case was diagnosed by Wherry and Lamb in Ohio in 1914.[51] The causative organism was reported in 1911 and 1912 by McCoy and Chapin, who discovered a "plague like" disease among rodents in Tulare County, California. They named the organism *Bacterium tularense*.[2] Francis in 1919 named the disease tularemia.[25]

By 1924 only 15 cases had been reported.[1] Since 1934, a diligent search for tularemia has been in progress at Confederate Memorial Medical Center, formerly, Shreveport Charity Hospital. In 1938, Mathews reported three of the earliest autopsied cases occurring at this institution, at the time the literature comprised 28 proven autopsied cases.[50] It has become recognized throughout the following years that tularemia is an important endemic disease in northwest Louisiana. It is to be emphasized that tularemia is not such an infrequent disease as thought, and this is true for the state of Louisiana. For here are considered 339 cases and Pullen and Stuart reported 225 cases from New Orleans Charity Hospital in 1945.[4, 53]

Because of the frequent occurrence of tularemia in this area, considerable experience has been accumulated and it is believed that these impressions should be offered for a better understanding of this disease.

The data presented are the results of the review of 339 cases. In this series all cases met one of the three following diagnostic criteria. The diagnosis must be proven by a rising titer of serial tularemia agglutinations performed at least forty-eight hours apart, or there was a typical clinical picture of tularemia with a single high agglutination titer, greater than a 1:160 dilution. In 64 cases the autopsy findings alone were diagnostic. Guinea pig inoculation of infected organs of these cases were used to substantiate the autopsy findings. In 25 of the cases the patient either had a negative agglutination or died before the agglutination study could be obtained.

Incidence

During the period of this study there was an average of 15 cases of tularemia per year; during the same period the total hospital admissions averaged 22,000 per year. Seventy-nine per cent (79%) of the cases of tularemia were in the Negro race, though only 65 per cent of all hospital admissions were of this race. Pullen and Stuart found no significant difference in racial susceptibility, negro and white patients being equally affected.[53] Men were affected more often than women by a ratio of 3:1. This may be due to a greater chance for exposure. Forty-four percent (44%) of the cases were farmers and were from more rural areas. The disease is found most frequently in farmers,

* Senior Visiting Physician: Confederate Memorial Medical Center. Assistant Professor of Clinical Medicine, Louisiana State University School of Medicine Postgraduate School.

hunters, butchers, cooks and laboratory workers.[45]

Age

The age of the patients ranged from one to 80 years, with the decade between 10 to 19 showing the greatest incidence, revealing 25 per cent of the total cases involved; whereas 68 per cent of the total series occurred in the adult cases. This age incidence is in contradistinction to previously reported series in which over half of the cases occurred between the ages of 30 and 50.[1]

Monthly Occurrence

The majority of cases were seen in April, May, June and July. This is explained by the added factor of the tick as a vector, whereas, during the winter months the rabbit was a prevalent vector of the disease. Corwin has noted the meteorological aspect of tularemia, relating the incidence to be less during drought years and increased during the wet years. Seventy-five per cent of these cases occurred during May, June, July and August.[16]

Location

These 339 cases came from 12 Parishes of Louisiana with 230 cases (67 per cent) residing in the three northwestern Parishes of the state. Caddo Parish alone had 115 cases (34 per cent). The greater incidence in this portion of the state may be due to an increased general populace, with considerable wooded areas for game and many small land farmers prevalent in this area. Also Confederate Memorial Medical Center draws patients primarily from the northwestern portion of the state. The disease, however, is widespread and has been reported from all parts of the United States and Canada.[35, 36, 40, 43, 47, 51, 55]

Familial Occurrence

An interesting and rather important study revealed that from this series a definite familial occurrence was occasionally found. It was noted that there were 11 family groups involving 29 cases which ranged from 2 in the same family to 4 in the same family. Seventy-two and four tenths per cent of the familial cases were typhoidal in type and 20.6 per cent were ulceroglandular. Forty-one per cent (41%) of those cases showing familial occurrence expired of the disease.

Organism and Vector

The causative organism of tularemia has been named *Pasteurella tularensis.* The organism is a pleomorphic Gram negative, nonmotile coccobacillus, which grows on cystine glucose media.[8, 24] The colonies are round, opaque, smooth and buttery in consistency.[45] The organism is dangerous to grow in the ordinary laboratory, and frequently gives rise to accidental laboratory acquired infections. For this reason the organism is not cultured in most laboratories. The organism can be killed by heat at 56° C. to 58° C. for ten minutes, with thorough cooking of infected tissue and formalin. Rabbit tissue kept frozen at minus 14° C. retains the virulence of the organism for six to eighteen months.[45]

Tularemia occurs primarily in rodents and animals and at times may become epizootic among animals. The infection tends to occur naturally in rabbits, coyote, wild gray fox, ring necked pheasant,[51] rats, squirrels, beavers, oppossums, skunks, muskrats,[36] quails, grouse, sage hens, fish, hogs, mice, sheep and house pets.[45]

Approximately 1% of wild rabbits are naturally infected.[28] Any rabbit found dead should always be viewed with suspicion. Burroughs and associates listed 48 vertebrates known to be naturally infected with *Pasteurella tularensis*[27] Several arthropods and other insects as ticks, horse flies, lice, mosquitoes and flies[45] act as vectors to transmit the infection between animals and to man. The ticks most commonly involved in transmission of human tularemia include: *Dermacentor andersoni* (the wood tick), *Dermacentor variabilis* (the dog tick), *Amblyoma americanum* (the lone star tick), *Dermacentor occidentalis* and *Ixodes vicinus californicus.* The bird tick *Haemophysalis cinnabarina* is responsible for transmission from one location to another. The rabbit

tick *Haemaphysalis leporispalustis* is of importance only in transmission of the disease among rabbits.[51, 54] The disease may be transmitted by the blood sucking ability of the tick and by virtue of excreta deposited on the skin and by crushing the tick upon removal.[51] Among the common ticks encountered in this vicinity responsible for transmission is *Dermacentor andersoni* (the wood tick) and *Dermacentor variabilis* (the dog tick).

Tularemia due to contact with rabbits is usually seen in November and December. Tularemia caused by the bite of flies occurs principally from June through September. Tick bites of *Dermacentor andersoni* result in tularemia from March through August and *Dermacentor variabilis* from January through October.[54]

The portal of entry may be through the unbroken skin, the alimentary tract, the oral mucous membranes and the conjunctiva. Man to man transmission is extremely rare. The ulcers and bulboes have been handled with much impunity, and contact of hospital personnel to individuals dying of the illness have failed to present even one clinical case at this institution.

In this series of 339 cases only three vectors were encountered; the tick, rabbit and squirrel. The frequency of the vectors is as follows in Table 1.

TABLE 1
VECTORS

Vector	Number of Cases	Per Cent
Tick	94	27.7
Rabbit	64	18.8
Squirrel	10	2.0
Unknown	171	50.4

It has been estimated that 90 per cent of the infections in the United States follow exposure to the tissues or secretions of rabbits.[26] Others have recorded an incidence of 63 per cent for tick borne tularemia.[53]

Very little emphasis has been placed on those cases with no history of contact. In this series as shown 171 cases either denied contact with a vector or a history of contact could not be established. Therefore, failure to determine a history of vector should not eliminate the diagnosis of tularemia in a febrile illness. In only the ulceroglandular form of the disease was there a fairly constant association of the vector and the ulcer.

Incubation Period

The incubation period was difficult to determine because of the large number of cases in which a vector history could not be ascertained. In those cases with a reliable vector history the incubation period ranged between a few hours to fourteen days, with an average of five and two tenths (5.2) days. The type of the disease did not alter the incubation period. Pullen and Stuart report an average incubation period of 4.6 days in 225 cases.[53]

General

Study of these cases has revealed that tularemia is an extremely variable febrile disorder, due primarily to the several portal of entries, and secondarily because of the great fluctuations in the degree of morbidity as seen from one case to another. The disease may be seen as a severe, toxic, overwhelming infection or it may occur as a prolonged disorder with low-grade fever and adenopathy. Prodromal symptoms are rarely exhibited. In the vast majority of cases the symptoms usually begin abruptly. Considering the entire group the most frequent symptom was fever; with chills, headaches, usually severe and most often frontal, backache, generalized muscular aches, malaise and weakness, in respective order of occurrence. The nonfatal cases showed, in the first week, an average temperature of 102° F., in the second week 101° F., the third week 100° F. and in the fourth week the patient tends to become afebrile. The patient becomes completely afebrile, on the average, the thirty-second day. In those cases that go on to expire, the second week reveals an average temperature of 102.6° F., and the third week, 103° F. The fever is usually spiking in character, rising chiefly in the afternoon. The pulse rate is increased but not to the proportion expected in a febrile illness.

Neurological symptoms and signs may appear, the most frequent being nonspecific phenomena; as delirium, stupor, and restlessness. These symptoms have been attributed to the severe toxic state induced by the organism. Other more specific neurological complications may also be seen.

In a series of cases reported by Jerzy Glass,[52] 28 out of 58 hospitalized cases revealed meningeal involvement, none of which were purulent. The involvement was transient and regressed during the course of the disease. The cerebrospinal fluid pressure was increased and the fluid was transparent, clear, and watery. The cell count was normal, but in one-third the protein was increased to 100 to 160 mg./100 cc. These cases usually demonstrated nuchal rigidity, positive Kernig and Brudzinski signs.[52] Actual purulent meningitis has been reported.[4, 52] No cases with meningitic symptoms or findings were evident in this series. Meningoencephalitis has rarely been reported. When present these cases demonstrated hallucinations, hyperkinesia, convulsions, positive Babinski and dilated pupils which react slowly to light.[52] Finally, Raphael et al reported on a case of peripheral polyneuritis involving both motor and sensory components.[41]

On occasion hepatomegaly and splenomegaly were found but was not a constant finding. Jaundice was frequently seen in the more seriously ill. No cutaneous rash was observed in this series. Other reports have set forth various skin manifestations; among the most important were maculopapular, papular, erythema nodosum, vesicular and pustular.[45, 53]

Individual cases may show prolonged illnesses and may be referred to as chronic tularemia. In one such case draining adenopathy persisted for thirteen months; in still another case, a 48 year old white male entered the hospital with ulceroglandular form of tularemia with pneumonia due to a tick bite and expired six months later. Van Metre reported on 9 of 44 laboratory acquired patients that had disabling complaints for at least five months despite repeated courses of antibiotics. Chronic disability occurred only in patients with the typhoidal type of infection and was more frequent in the group that did not receive specific therapy within the first thirty days of the disease.[38]

Of special interest were 2 cases that were pregnant, one was in the fifth month of pregnancy. This patient was given streptomycin, the febrile illness apparently cured and the patient went on to a normal nine month termination of pregnancy. Another case in a Negro female who aborted a one and one-half months pregnancy on the thirty-fifth day of illness. Pullen and Stuart refer to three pregnant women that contracted tularemia, all gave birth to normal children.[53]

Depending upon the author[24, 43, 52, 53] reporting the disease, various classifications have been utilized. In this study, the disease is divided into four clinical types; ulceroglandular, typhoidal, oculoglandular, and glandular. The following (Table 2) illustrates the various forms and the frequency of each type:

TABLE 2
TYPES

Type of Disease	Number of Cases	Per Cent
Ulceroglandular	179	52.8
Typhoidal	102	30.0
Glandular	44	12.9
Oculoglandular	14	4.1

Ulceroglandular Tularemia

The ulceroglandular form was the most common type. It occurred in 179 cases or 52.8 per cent of the total 339 cases. This is a smaller percentage than that reported previously. The ulceroglandular cases have accounted for 80 per cent of other series.[53] The ulceroglandular form presents a primary peripheral lesion and secondary regional lymphadenopathy. The primary lesion may vary from a pustular lesion, a crusted erythematous lesion, or to a dirty shallow ulcer with a grey necrotic base with irregular undermined firm edges with a small border of surrounding erythema. The ulcer may measure as much as 2 cm. in diameter. Pullen and Stuart re-

port four patients with multiple lesions of one hand or finger. In one case four ulcers were present.[4] The upper extremity was involved in 70 per cent of the ulceroglandular cases and a definite correlation between the site of the ulcer and the vector could be made (70 per cent). In those cases of the ulceroglandular type transmitted by the rabbit or squirrel the primary lesion was peripheral, that is distal to the wrist and in those cases in which the tick was the vector the ulcer was centrally located in moist areas such as the arm pit, scrotum, penis and body in general. The duration of the primary lesion has been reported to be thirty-two days.[4]

The regional nodes draining the site of the primary lesion are involved, usually enlarged to the size of a pecan or small orange measuring 3 to 6 cm. in diameter. The lymph nodes are described as painful or tender, firm in consistency, discrete and freely movable. Later, they became soft and fluctuant because of abscess formation. Along the course of the lymphatics, subcutaneous lymphangitic nodules were found in a few cases simulating sporotrichosis. The nodules were nontender, freely movable and firm. Twenty-eight and four tenths per cent (28.4%) of the nodes either drained spontaneously or necessitated surgical drainage. The nodes would remain enlarged for varying periods after the patient was considered clinically well. The average duration of adenitis has been reported to be forty-six days.[4] The majority of the ulceroglandular cases did not present an overwhelming toxic infection as other forms. Seventeen per cent of the ulceroglandular cases exhibited the pneumonic manifestation, and 24 cases (or 13.4 per cent) of the ulceroglandular cases expired.

Typhoidal Tularemia

Typhoidal tularemia was the most serious form of the disease. This type was diagnosed in patients that demonstrated no primary ulcer lesion, no eye involvement, and no adenitis, except that lymphadenopathy associated with oropharyngeal involvement. The typhoidal form of the disease was encountered in 102 cases (or 30 per cent) of the total 339 cases. This was far in excess of the reported 6 per cent in other series.[4, 53, 57] Not infrequently would two or more members of the same family manifest this type of disease.

These patients were usually seen acutely ill with septic fever, prostration, delirium, marked dehydration, vomiting, meningismus and diarrhea. Diarrhea was limited to this variety. The diarrhea was usually loose and watery. The history of a vector was found least in this group and proved to be of little value in diagnosis.

Oropharyngeal involvement was manifest in this variety. This involvement was noted in 36 cases (or 35.2 per cent) and was the cause of the only clinically evident adenopathy in this group.

Pleuropulmonary involvement was frequently encountered in this variety, adding the symptomatology and signs of this manifestation to the already confused clinical picture of typhoidal tularemia. Involvement of the pulmonary tract was found in 45 cases (or 44 per cent).

The typhoidal variety revealed by far the greatest mortality. Thirty-five cases (or 34.3 per cent) of this type of tularemia expired.

Glandular Tularemia

The glandular form of tularemia was found in 44 cases (or 12.9 per cent). The cases revealed no peripheral primary lesion, but were characterized by adenopathy. These patients presented the least toxic of all forms of the disease and the disease existed as a vague illness prior to admission. The usual complaint related only to adenopathy. The axillary lymph nodes were most frequently involved. The adenopathy was usually prolonged. Only 5 of these cases exhibited pneumonia and only 2 cases (4.5 per cent) expired.

Oculoglandular Tularemia

The oculoglandular form was the least frequent type of the disease to be encountered. There were 14 cases or 4.1 per cent of the total. Occasionally this form of the disease was found in associa-

tion with another type of tularemia. In 1947, Minden et al stated that there were 87 recorded instances of oculoglandular tularemia in the United States.[13] A few scattered cases have been reported since that time.[46, 48]

Besides the general symptomatology the oculoglandular cases also complained of photophobia, dimness of vision and excessive lacrimation. These cases exhibited ulcers or yellow papules on a reddened congested conjunctiva. One eye alone is usually involved.[13] The cervical and preauricular nodes were found involved in the majority of cases. The duration of illness was increased in this form to an average of fifty days. In no case were there any late eye sequelae. The complications most likely to be encountered are suppurative adenitis, ulceration of the cornea, and acute purulent dacrocystitis.[13]

Apparently, there are three illnesses which may cause a severe necrotizing conjunctivitis with membrane formation with preauricular nodal enlargement and associated high fever and generalized debility. These are tularemic conjunctivitis, diphtheric conjunctivitis and streptococcal conjunctivitis. All three illnesses may form a membrane. The lids in diphtheria are stiff and brawny, a finding not seen in tularemia. The membrane of diphtheria is usually grey, while that of tularemia is yellow. In both, the membrane bleeds upon removal. Corneal complications are rare in tularemia but frequent in diphtheria. Streptococcal conjunctivitis may present a membrane which spreads rapidly, and corneal involvement occurs early, with necrosis, perforation and its complications.[45]

In only 3 cases was pneumonia encountered and all expired. Minden reported a mortality rate of 9 per cent in 78 cases.[13]

Anginal Manifestation

Involvement of the oropharynx in tularemia is a complication which has received little attention previously. The first case of oropharyngeal tularemia was recognized by McGovern in 1936.[29] The manifestation was particularly limited to the typhoidal form of the disease. Of 102 cases of typhoidal type, 36 cases (35.2 per cent) demonstrated involvement of the mouth and pharynx. Fourteen cases (38.8 per cent) with the anginal involvement expired. Hughes reported an incidence of 38.5 per cent or 5 cases out of 13 patients under 16 years of age with oropharyngeal involvement.[24] Out of a total of 1,563 cases of tularemia reviewed 68 (or 4.3 per cent) were of the oropharyngeal type.[24]

Those patients presented an ulcerative pharyngitis or demonstrated a grey necrotic membrane which covered the posterior pharyngeal wall and/or tonsils. Ulcers may be seen without a membrane. The involvement may spread to the anterior faucial pillars, the base of the tongue, the soft palate, uvula, and the buccal mucosa.[24] When present the membrane was removed with difficulty, but bleeding was not evident. The membrane resembled a diphtheric membrane in appearance in a number of instances. The involvement characteristically was accompanied by adenopathy in the anterior cervical area, not unlike regional adenitis of diphtheria infections.[8] Several patients were treated as diphtheria receiving large doses of antitoxin until the true nature of the membrane was discovered.

Pneumonia

Because of the severity of the manifestation of pulmonary infection in tularemia and the large number of cases with such involvement occurring in this series, it is deemed worthy of considerable attention. Primary pulmonic involvement is rare in naturally occurring tularemia, but has been reported in laboratory acquired infections with the respiratory tract being the principal portal of entry.[17] This is in contrast to pneumonia secondary to bacteremia as seen in other forms of the disease.[5] It is to be said that tularemia has thus far not been limited to lung involvement in a single case in this study, but as a serious manifestation of one of the four types of tularemia and may signify a seri-

ous prognostic viewpoint when such involvement is noted.

In this series of 339 cases of tularemia a total of 84 cases (24.7 per cent) were discovered to have pulmonary involvement. Other series report an incidence from 13 to 34 to 50 per cent.[32, 34, 53] Two hundred ninety-five cases of pulmonary infection were reported up to 1949.[57] Overholt reported 59 per cent with pulmonary involvement in laboratory acquired tularemia.[17] This manifestation was not limited to any one type of the disease, as can be seen; of the 84 cases demonstrating pulmonary involvement 45 cases (53 per cent) were typhoidal, 31 cases (36 per cent) were ulceroglandular, 5 cases were glandular and 3 cases oculoglandular.

Evidence of pulmonary involvement may be noted by symptoms referrable to the respiratory tract in about eight days (range 6.8 days to 9.6 days) following the onset of tularemia. The most consistent symptoms of this manifestation were cough, pain in the chest, dyspnea, and sputum. Four patients had hemoptysis. About 25 per cent of the cases offered no symptoms referrable to the lungs even with pathological autopsy findings of involvement.

Signs of pulmonary infection may be diffuse as moist rales throughout both lungs as seen in 57 per cent with pulmonary involvement or localized in 43 per cent revealing such signs as rales, dullness, bronchial breathing, increased vocal fremitus and in four cases friction rubs were noted.

Radiological evidence of pneumonic infection was noted on the average of fourteen days from the time of definite symptoms attributable to tularemia became prominent. In a few cases the time from known contact to known roentgenological evidence of pneumonia could be ascertained and averaged eighteen and a half days. These figures are important because it will be shown that death ensues too rapidly to await diagnosis when the pneumonic manifestation becomes prominent, but with adequate antibiotic therapy the mortality attendant with the manifestation may be lowered considerably. This has also been emphasized by others.[5] Thus of the 84 cases with pulmonary involvement 47 patients (55 per cent) expired; of 51 cases prior to the advent of streptomycin, 41 (80.4 per cent) expired; whereas since the use of a specific antibiotic therapy 33 cases have demonstrated pulmonary involvement with only six (18.1 per cent) deaths.

The x-rays in these cases revealed oval areas of homogenous increased density. These areas were not sharply demarcated and there was associated hilar adenopathy inconsistently present with areas of increased density radiating outward from the hilum to the oval areas. These findings were frequently diagnosed as atypical pneumonia. Millar studying 14 cases found fan shaped densities extending out from the lung roots; the shadows were often diffuse and hazy and were suggestive of atypical pneumonia.[40] The involvement was most frequently bilateral in nature. Overholt reports that the presence of an oval pneumonic patch or pleural effusion associated with hilar adenopathy occurring during a febrile illness should strongly suggest the possibility of tularemia. Ivie reported on the roentgen findings in 16 patients with pleuropulmonary tularemia and found no one finding pathognomonic of tularemia, however, the high incidence of an oval lesion similar to an unresolved abscess was striking and proposed that this finding in a pneumonia, particularly one which did not respond to the usual therapeutic agents should lead to the suspicion of tularemia.[32] Dennis could find hilar lymphadenopathy in but 3 cases out of 14 with pulmonary tularemia. These authors again emphasized the spherical configuration of the homogenous infiltrate, but also recognized another type of involvement, that of a stringy peribronchial infiltration and felt that this represented the earliest roentgen manifestation of the pulmonic involvement. Thus tularemia should be always considered a possible etiological agent in severe atypical pneumonia.

Pathologically the pulmonary involve-

ment reveals a variable range. The most frequently found involvement is subpleural focal necrosis described as yellow minute nodules 3 to 12 mm. in diameter. This involvement is found in 48.8 per cent of pneumonia processes. Secondly, bronchopneumonia is found in 30.2 per cent and described as placques of reddish consolidation scattered throughout the lungs measuring 2 to 5 cm. in diameter, most often with central softening. Thirdly, lobar pneumonia found in 16.2 per cent with consolidation of an entire lobe. Gangrenous abscesses 1.5 to 5 cm. were found in two cases, with another abscess measuring 7.5 cm. in diameter which had perforated into the pleural cavity. Finally, pleural effusion as seen in 7 cases with quantities of yellow turbid pleural fluid containing large amounts of fibrin and ranging between 200 to 1,000 cc. Dennis et al reported that 64 per cent or 14 cases revealed pleural involvement varying from a slight thickening of the interlobar septum to extensive effusion.[34]

The involvement of the lungs was found bilaterally in 65 per cent of the cases, the remaining cases revealed involvement most often in the lower lobes of the lungs with the left lower lobe being involved in 27 per cent and the right lower lobe in 18 per cent.

There was no involvement of the pericardium in association with the pneumonic manifestation. Adams in reviewing the literature in 1958 stated that 28 cases of pericardial involvement had been reported and added two cases; 25 of these cases were associated with pneumonia, pleurisy or both.[30] The involvement of the pericardium may be in the form of pericardial effusion with temporary cardiac embarrassment or chronic constrictive pericarditis in which pericardiectomy has been performed.[42]

Laboratory

The diagnosis of tularemia was made in these cases by the agglutination test, and in some cases by inoculation of a guinea pig or rabbit. An agglutination titer of 1:80 and above has been considered diagnostic.[45] In no case was the agglutination test positive before the beginning of the second week. Weakly positive tests were reported by the eighth day of illness and increasing titers were obtained (usually to 1:1,280 or more) by the third week. Serial agglutinations were performed in most cases and a rising titer was considered more significant than one which remained stationary. In some of the fatal cases the agglutination test was negative as long as the twenty-first day after onset of illness and in some of the death cases, postmortem blood was still negative. The agglutination remained high until the end of the fifth week at which time the titer began to slowly fall. The titer may remain elevated for long periods of time. In fact, Rosenthal reported the test may remain positive throughout life.[45] In 10 cases in which the agglutination test was done from six to twenty-seven weeks after the onset of illness a titer of 1:2,560 or more was found, and in one case a titer of 1:10,240. In another case a titer of 1:320 was found on the one hundred and eighty-second day of illness. Van Metre reported the existence of asymptomatic cases found by periodic subjection of laboratory personnel to agglutination titer determination. Asymptomatic infection with the virulent strains common to North America has been reported only in vaccinated individuals, and the absence of overt manifestations has been attributed to the immunity induced by the vaccine.[38] Tularemia vaccination has not been utilized in this area.

Hunter et al devised a flocculation test for tularemia. The titers are higher than with the agglutination tests and are said to be specific and no cross reaction occurs with brucella serum.[39]

The organism *P. Tularensis* may be cultured only on blood-glucose-cystine agar.[45] This was not utilized at this institution.

The guinea pig or rabbit can be inoculated with the pus from a bubo or in the death cases splenic scrapings were used and the pig usually dies on the sixth day and on autopsy shows focal necrosis of the liver and spleen.

Intradermal skin tests utilizing killed *B. Tularense* organism is a good diagnostic procedure during the first week. It is reported to be positive in 92 per cent of the cases when agglutinations are still negative. The test requires forty-eight hours to become positive.[45]

The hematological data reveals the total white blood cell count to have a wide range from 3,000 to 24,000. The white blood cell count in about one half of the cases showed a normal count and in the other half a leukocytosis even as great as 56,000 as seen in one case. The differential count tends to be normal in distribution, on occasion a neutrophilic predominance was noted when leukocytosis was evident. There is usually an associated microcytic hypochromic anemia.

The sedimentation rate is markedly increased. The heterophile agglutination (Paul-Bunnel) was found to be increased above 1:112 in a number of cases, and tended to become positive before the tularemia agglutination.

Agglutination for brucella, paratyphoid, typhoid and typhus were performed in the vast majority of cases. There was no significant cross agglutination with *Brucella abortus;* and no titer was elevated to the extent to cause confusion. The other agglutinations revealed no significant elevation.

Deaths

Analysis of these 339 cases revealed that there were 64 deaths or a mortality rate of 18.8 per cent. This mortality rate is far in excess of that previously reported by other series with fatality rates of 2.7 per cent[6, 24] to 7.55 per cent.[53] More impressive data is found in analyzing 172 of the earlier cases from 1934 to 1948 in which there were 53 deaths with a mortality rate of 30.8 per cent. With the development of a specific antibiotic agent and a better understanding of the disease, the mortality rate has decreased. In 167 cases seen since 1948 only 11 cases have expired with a mortality rate of 6.5 per cent. All cases that died were autopsied. Ninety-six and eight tenths per cent (62 cases) were in the Negro race. Fifty-four per cent of the deaths were typhoidal, 37 per cent were ulceroglandular, 2 were glandular and 3 oculoglandular. The average age of those dying was 55 (range 17 to 79).

The duration of the illness varied from six to thirty-nine days with an average of sixteen days before death ensued. Pullen and Stuart reported the average duration of the illness before death to be 30.8 days.[4] Since agglutinations for tularemia do not become positive before the beginning of the second week of illness, the patient may die before the agglutination can be useful in diagnosis, and about the same time roentgenological evidence of pneumonia was demonstrable. Twenty-five cases expired with a negative agglutination test.

Mode of Death

In one case which expired on the thirty-ninth day of illness the cause of death was a rapidly expanding retrolaryngeal abscess which apparently occurred after the patient was afebrile but enlarged so rapidly that tracheal obstruction and death occurred before the abscess was recognized. All of the other cases were dramatic infections. These patients died in one of two ways. Firstly, some died rapidly apparently due solely to an overwhelming toxemia or septicemia. None of these cases received streptomycin.

Secondly, in reviewing the deaths prior to 1948 it became apparent that some of these patients developed peripheral vascular collapse, hypotension, hypoglycemia, acidosis, oliguria and anuria with clinical azotemia. Thus all subsequent cases presenting similar clinical features were intensively studied, since there have been 6 cases to expire in a clinical picture of uremia and at autopsy were found to have the so-called lower nephron lesion. This acute renal failure was evidenced clinically with terminal oliguria, acidosis and azotemia. The nonprotein nitrogen averaged 152.2, and the creatinine level averaged 7.2. The following (Table 3) outlines the final NPN and creatinine in each case.

The pathological processes found on examination of autopsied material in addi-

TABLE 3

Case Number	N.P.N	Creatinine
527959	197.2	9.1
503005	156.1	6.5
504724	130.7	2.8
505742	156.0	4.0
521075	173.6	14.0
507909	100.0	7.0

tion to the kidneys reveal that the sclera is jaundiced in a great per cent of cases. The lungs are involved in 73.4 per cent of the autopsied cases, and here the process varied from minute miliary seeding to gross areas of consolidation and abscess formation. In one case a solitary abscess was found in the left lower lobe measuring 7.5 cm. in diameter. Large abscesses developing within the pneumonia have been reported previously.[49] Pleural effusion was found in seven cases and in three cases a thick fibrinocellular exudate was found on the pleural surfaces of the lungs. Pullen and Stuart noted a pleural reaction associated with pneumonia in approximately 50 per cent of the cases.[33] Each lung weighed between 400 and 1,340 grams (the greatest).

The liver and spleen were involved in nearly every case with focal necrotic lesions. The lymph nodes in some part of the body were involved in nearly every instance. The pathologist at this hospital in performing the 64 autopsies noted the frequent occurrence of areas of necrosis involving the liver, spleen and upper abdominal lymph nodes. These changes resembled those encountered in miliary tuberculosis. These findings were so consistent that in a patient dying of a febrile illness of two weeks or less duration came to be relied upon as a dependable diagnostic combination in tularemia, and has come to be known as the "Mathews triad".[7] The bone marrow consistently revealed the typical focal necrotic lesion of tularemia.

In a few cases ulcers were found in the esophagus, stomach, ileum, appendix, and colon. The adrenals were involved in two cases. No cases were found with definite focal necrotic lesions of the brain or meninges. Jerzy Glass reported that six fatal cases of purulent tularemic meningitis are recorded in the American literature.[52]

Treatment

Since 1934 numerous drugs were used in the treatment of tularemia at this institution. Unlike the literature of the time, which had reported some degree of response to mercurochrome, neoarsphenamine, sulfanilamides particularly sulfathiazole,[9] bismuth sodium tartrate,[10] antiserum,[3] and penicillin, these drugs proved to be of little value in the management of tularemia. This is emphasized by the fact that of 172 cases seen prior to the advent of a specific drug therapy there were 53 deaths or a mortality rate of 30.8 per cent. In 167 cases seen following the development and use of streptomycin only 11 cases, (6.5 per cent) have expired. Other reports since 1944, when Heilman reported the use of streptomycin in experimental tularemia, have confirmed that streptomycin is an effective therapy in both experimental, laboratory and clinical tularemia.[5, 7, 11-15, 23, 22, 46]

In vitro studies reveal that streptomycin is bacteriostatic for most strains of *P. Tularensis* at concentrations of less than 0.4 μ/ml. and bactericidal at 1.9 μ/ml.[6, 17] After the production of streptomycin or the analogue dihydrostreptomycin it became generally used as the basic drug of choice at this institution. With few exceptions where newer antibiotics have been tried, almost every case since 1948 has received streptomycin or its derivative. Streptomycin has generally been given in daily doses of 1 to 3 grams. The maximum response was obtained with 250 mgm. every four hours, with this dosage schedule the patients tended to become afebrile by lysis within forty to seventy-two hours, and there was improvement of general symptoms of headache, myalgias, chills and nausea by the end of the first day. With one half of this dosage or 125 mgm. it was found that the patients became afebrile in seven to nine days after institution of therapy. Fever varied from one to forty days while on treatment the longer being associated with suppurative

lymph nodes. The average duration of febrile illness is shortened from the aforementioned thirty-two days to nineteen days.

As with other reports if streptomycin therapy is started within the first seven to ten days of illness, the clinical response is dramatic. If treatment is started later the response is satisfactory but not as impressive as early treatment.[40] No appreciable benefit was observed when the drug was given in dosages above 2 grams daily; and it is believed that the minimum beneficial dosage is 1 gram in divided doses. This dose has been introduced by others to be the adequate dose.[44]

It is felt that treatment should be continued for one week after the patient becomes afebrile. It does not appear that streptomycin therapy affects the immune response since agglutination titers tend to rise as in the untreated cases. This continuing immune response with therapy was also noted by Johnson et al[12] and Foshay.[14] However, the guinea pigs used for inoculation of tissue scrapings in six autopsied cases that received streptomycin did not die as those guinea pigs used in the untreated cases, possibly because of the bactericidal nature of streptomycin.

Streptomycin therapy may be so bactericidally efficient that a Herxheimer-like reaction may be produced after one or two days treatment. Excess antigen is present in the circulating blood. This reaction manifests itself as an increase in general symptoms, including a rise in temperature, malaise, decrease in agglutination titer and general ill feelings again. With continuation of therapy the patient undergoes rapid recovery.[45]

Streptomycin therefore should be given on the slightest clinical suspicion of the disease, even before serological proof of the disease can be obtained, only in this way can the mortality rate be lowered.

Chloramphenicol was used in 16 cases. The drug at first appeared to cause defervescence as effectively as streptomycin in cases in which it was used alone, however, further study has shown that streptomycin remains the drug of choice. With chloramphenicol one case failed to respond completely and one case relapsed once while on the drug, but subsequently did well with continuation of the drug. Parker et al observed two relapses among 6 patients treated with chloromycetin.[19] McCrumb et al in induced ulceroglandular tularemia has emphasized that those who received chloromycetin experienced febrile relapses whereas the cases treated with streptomycin remained well.[20]

Chlorotetracycline has shown some equivalent results to streptomycin in the few cases in which the drug was used singularly. Corwin and Stubbs in studying 44 cases pointed out that chlorotetracycline was effective in securing remissions but unlike streptomycin was not curative.[21] Overholt et al in reporting on 42 laboratory acquired tularemia cases showed that 75 per cent of the hospitalized patients resulted from laboratory strains resistant to streptomycin, the remainder from streptomycin sensitive strains. Thirty-one of the hospitalized group were treated with broad spectrum antibiotics receiving 2 grams daily for seven to fourteen days. Among 15 of the patients so treated during the first week of disease, 5 suffered relapses whereas in 16 patients with similar therapy instituted after the first week of disease no relapses occurred. They felt the drugs were bacteriostatic and fail to eradicate the organism from the host. They also felt that retreatment during relapse with the same antibiotic is effective.[17]

Cortisone and its newer analogues have been used in a few moribund cases, but have proved to be of little value when renal failure is evident.

Prompt institution of other supportive measures such as glucose infusions, transfusions, and attempts to correct the electrolyte imbalance and dehydration in those cases in which a poor prognosis is apparent has been helpful in reducing mortality from tularemia.

Summary

Tularemia is an infectious disease recognized for the past half century, com-

plexity of symptoms is the rule in individual cases, but uniform in nature when considered as a disease, with certain predictable features that remain unchangeable with time. The disease has been intensively studied at this institution and numerous literary contributions have been forthcoming from this material. One cannot know tularemia by seeing one case, but most become familiar with the disease over a passage of years. This article sets forth the results of a study of 339 cases. The disease in this area is most frequently seen in April, May, June and July.

In this series the high frequency of no vector history is brought out and it is again emphasized that though no vector could be established this should not rule out the diagnosis of tularemia in any febrile illness. Many cases may be present in a single family probably indicating a common source of the disease. Most of the cases are farmers and from rural areas. The Negro race was particularly prone to the disease accounting for two-thirds of the cases, but almost all of the death cases.

The disease tends to run a natural course of thirty-two days. The course of the disease is variable, some cases being quite septic with fever and marked prostration and some were prolonged illnesses of considerable duration. These cases were divided properly into the ulceroglandular, typhoidal, glandular and oculoglandular forms. An attempt to demonstrate that pneumonia exists only as a manifestation and may be seen in any form instead of existing as a clinical entity is evident. Sixty-four of these cases expired and were autopsied. The materials from these autopsy studies are presented. Although several manifestations and pathological findings are not as evident as in the literature, i.e. no meningitis, encephalitis or pericarditis was found, certain valuable material is forthcoming revealing the mode of death may be due to overwhelming septicemia or to the so-called lower nephron syndrome, manifested by uremia, oliguria, acidosis and sometimes hypoglycemia. The disease is a disseminated disease by virtue of involvement of the lungs, liver, spleen and lymph nodes somewhere in the body in nearly every case and points out the septicemic nature of the disease. Host response to the disease is oft times poor as can be seen in those cases dying with negative agglutination titers.

Many forms of therapy have been utilized and until the advent of streptomycin no one therapy proved to be of any great value. Streptomycin was the basic drug of choice and its continued use has shown it to be an effective drug in the treatment of tularemia.

Conclusions

1. Three hundred thirty-nine cases of tularemia are reviewed, 52.8 per cent being ulceroglandular, 30.0 per cent were typhoidal, 12.9 per cent glandular and 4.1 per cent oculoglandular.

2. A definite familial tendency in some cases was noted. There is a high incidence (50.4 per cent) of cases in which no vestor could be established. This absence of vector history should not eliminate the diagnosis of tularemia in a febrile illness.

3. There was an unusually high incidence of oropharyngeal involvement particularly in the typhoidal form. The pneumonic manifestation was severe and led to a poor prognosis when seen, with a 55 per cent mortality being noted.

4. The findings of 64 autopsied cases are presented, demonstrating the septicemic nature of the disease. Evidence of lower nephron nephrosis was presented demonstrating that these patients expire in uremia.

5. Streptomycin was found to be the basic drug of choice and since the institution of the drug has proven to be curative in most cases.

References

1. Musser, John H.: Internal Medicine, its Theory and Practice, 86, 1945.

2. McCoy, George W., and Chapin, Charles W.: Further Observations on a Plague-like disease of Rodents with a Preliminary Note on the Causative Agent, Bacterium Tularense, J. Infect. Dis. 10:60.

3. Foshay, Lee: Tularemia: A Summary of Certain Aspects of the Disease Including Methods for Early

Diagnosis and the Results of Serum Treatment in 600 Patients. Medicine 19:1, 1940.

4. Pullen, R. L. and Stuart, B. M.: Tularemia, Analysis of 225 cases. J.A.M.A. 129:495, 1945.

5. Hunt, John S.: Pleuropulmonary Tularemia: Observations on 12 Cases Treated with Streptomycin, Annals of Internal Medicine 26:263 (February) 1947.

6. Foshay, Lee: Treatment of Tularemia with Streptomycin. Am. J. Med. 2:467 (May) 1947.

7. Giddens, W. R., Wilson, J. W., Jr., Dienst, F. T., Jr., Hargrove, M. D.: Tularemia, An Analysis of One Hundred Forty Seven Cases. J. Louisiana State M. Soc. 109:93 (March) 1957.

8. Harrison, T. R.: Principles of Internal Medicine, McGraw-Hill 1951.

9. Weilbaecher, J. O., Jr., and Moss, Emma S.: The Treatment of Tularemia with the Thiazole Derivative of Sulfanilamide, New Orleans M. and S. J. 92:694 (June) 1940.

10. Jackson, W. W.: The Treatment of Tularemia with Intravenous Bismuth Sodium Tartrate, Amer. J. Med. Sciences 209:513 (April) 1945.

11. Heilman, F. R.: Streptomycin in the Treatment of Experimental Tularemia, Proc. Staff Meetings Mayo Clinic 19:533 (November 29) 1944, No. 24, 1944.

12. Johnson, J. B.; Wilkinson, C. B.; Figueras, E.: Tularemia Treated with Streptomycin, Amer. J. M. Sciences (December) 1947.

13. Minden, P., and Springer, J. E.: Oculoglandular Tularemia Treated with Streptomycin, J.A.M.A. 134: 1061 (July 26) 1947.

14. Foshay, L., and Pasternack, A. B.: Streptomycin Treatment of Tularemia, J.A.M.A. 130:393, 1946.

15. Pulaski, E. J., and Amspacher, W. H.: Streptomycin Therapy of Tularemia in U. S. Army Hospitals, Amer. J. M. Sciences 214:144 (August) 1947.

16. Corwin, W. C.: A Note on the Natural History of Tularemia, J. Louisiana State M. Society 112:266 (July) 1960.

17. Overholt, E. L., Lt. Col.; Tigertt, W. D., Col.; Kadull, P. J.; Ward, M. K.; Charkes, N. D.; Rene, R. M.; Salzman, T. E.; Stephens, M.: An Analysis of Forty Two Cases of Laboratory-Acquired Tularemia, American Journal of Medicine 30:785 (May) 1961.

18. Francis, E.: Streptomycin in the Treatment of Tularemia, Tr. A. Am. Physicians 60:181, 1947.

19. Parker, R. T.; Lister, L. M.; Bauer, R. E.; Hall, H. E., and Woodward, T. E.: Use of Chloramphenicol (Chloromycetin) in Experimental and Human Tularemia, J.A.M.A. 143:7, 1950.

20. McCrumb, F. R., Jr.; Snyder, M. J., and Woodward, T. E.: Studies on Human Infection with Pasteurella Tularensis. Comparison of Streptomycin and Chloramphenicol in the Prophylaxis of Clinical Disease, Tr. A. Am. Physicians 70:74, 1957.

21. Corwin, W. C., and Stubbs, S. P.: Further Studies on Tularemia in the Ozarks. Review of Forty-Four Cases During a Three-Year Period, J.A.M.A. 149:343, 1952.

22. Saslaw, S.; Eigelsbach, H. T.; Prior, J. A.; Wilson, H. E.; Carhart, S.: Arch. Int. Med. 107:134 (May) 1961, Tularemia Vaccine Study.

23. Saslaw, S.; Eigelsbach, H. T.; Wilson, H. E.; Prior, J. A.; Carhart, S.: Tularemia Vaccine Study, Arch. Int. Med. 107:121 (May) 1961.

24. Hughes, W. T., and Etteldorf, J. N.: Oropharyngeal Tularemia, J. of Pediatrics 51:363, 1957.

25. Francis, E.: Tularemia: A Disease of Man, J.A.M.A., 78:1015, 1922.

26. Stuart, B. M., and Pullen, R. L.: Communicable Diseases, Philadelphia, 1950, Lea and Febiger 641-658.

27. Burrough, A. L.; Holdenreid, R.; Longanecker, D. S., and Meyer, K. F.: A Field Study of Latent Tularemia in Rodents with a List of all Known Naturally Infected Vertebrates, J. Infect. Dis. 76:115, 1945.

28. Francis, E.: Sources of Infection and Seasonal Incidence of Tularemia in Man, Pub. Health Rep. 52: 103, 1937.

29. McGovern, F. H.: Primary Tularemic Ulcers in Pharynx, J.A.M.A. 107:1629, 1936.

30. Adams, C. W.: Tularemic Pericarditis—Report of Two Cases and Review of the Literature, Diseases of the Chest 34:632, 1958.

31. Marshall, B. W., and Zimmerman, S. L.: Tularemic Pericarditis, Arch. Int. Med. 100:300, 1957.

32. Ivie, J. McK.: Roentgenological Observations on Pleuropulmonary Tularemia, Amer. J. Roentgeno. Radium Therapy and Nuclear Med. Vol. 74, 1955.

33. Stuart, B. M., and Pullen, R. L.: Tularemic Pneumonia, Review of American Literature and Report of Fifteen Additional Cases, Amer. J. Med. Sciences 210: 223 (Augnst) 1945.

34. Dennis, J. M., and Boudreau, R. P.: Pleuropulmonary Tularemia: Its Roentgen Manifestations, Radiology 68:25, 1957.

35. Black, D. M., and Thomson, J. A. C.: Tularemia in British Columbia, Canadian M.A.J. 78:16 (January 1) 1958.

36. Harris, T .A.: Tularemia Among Farmer-Trappers in Northwestern Saskatchewan, Canadian M.A.J. 74:60 (January 1) 1956.

37. Dahlen, C. P.; Kaplan, L.; Goodwin, W. E.: Priapism Occurring as a Complication of Tularemia, J. Urol. 72:1192 (December) 1954.

38. Van Metre, T. E., and Kadull, P. J.: Laboratory Acquired Tularemia in Vaccinated Individuals: A Report of Sixty Two Cases, Ann. Int. Med. 50:621 (March) 1959.

39. Hunter, C. A.; Burdoff, R., and Colbert, B.: Flocculation Tests for Tularemia, Lab. and Clin. Med. 51:134, 1958.

40. Millar, John: Tularemia in Northwestern Ontario. Canadian Med. A. J. 69:102 (August) 1953.

41. Raphael, M., and Anderson, A. E.: Pleuropulmonary Tularemia Complicated by Peripheral Neuritis, Arch. Int. Med. 91:278, 1953.

42. Meredith, H. C.: Tularemic Pericarditis: A Report of Two Cases Including One of Constrictive Pericarditis, Ann. Int. Med 43:688, 1950.

43. Hamilton, E. L.: A Case of Pulmonary Tularemia Treated with Aureomycin, New England J. Med. 248: 1013, No. 24 (June 11) 1953.

44. Levy, H. B.; Webb, C. H.; Wilkinson, J. D.: Streptomycin Therapy for Childhood Tularemia, New Orleans M. and S. J. 103:78, 1950.

45. Rosenthal, J. W.: Oculoglandular Tularemia, New Orleans M. and S. J. 102:558, 1949-50.

46. Rosenthal, J. W.: Tularemia Treated with Streptomycin Analysis of Fifty-Four Cases, New Orleans M. and S. J. 103:477, 1950-51.

47. Ayers, J. C., and Feemster, R. F.: Epidemiology of Tularemia in Massachusetts with a Review of the Literature, New England J. M. 238:187, 1948.

48. Lindeke, H. I., and Maiden, S. D.: Oculoglandular Tularemia Treated with Aureomycin, J.A.M.A. 142:99 (January 14) 1950.

49. Ray, E. S., and Warren, S.: Tularemic Lung Abscess, Amer. Rev. Tuberc. 65:627, 1952.

50. Mathews, W. R.: Personal Communication—Printed in Tristate Medical Journal, not now in print.

51. Bow, M. R., and Brown, J. H.: Tick-Borne Diseases of Man in Alberta, Canadian M.A.J. 52:459 (November) 1945.

52. Glass, G. B. Jerzy: Tularemic Meningism and Serous Meningitis. A Report of Twenty-Eight Cases Observed During an Epidemic of Tularemia Transmitted by Insects in Settlements of Deportation Asino and Jaja, Siberia U.S.S.R., M. Clin. N. America, p. 769 (May) 1948.

53. Pullen, R. L., and Stuart, B. M.: Tularemia, New Orleans M. and S. J. 98:126 (September) 1945.

54. Byfield, G. V.; Breslow, L.; Cross, R. R., and Hershey, N. J.: Tick-Borne Tularemia; Report of Fifteen Cases, J.A.M.A. 127:191 (January 27) 1945.

55. MacKenzie, E. A.: Tularemia—A Problem in Diagnosis, Canadian M. Assn. J. 54:485 (May) 1946.

56. Bost, R. B.; Percefull, S. C., and Leming, H. E.: Tularemia in the Ozarks Region, J.A.M.A. 137:352 (May 22) 1948.

57. Crellin, J. A.; Pugh, T. F., and Janton, O. H.: A Case of Fatal Tularemic Pneumonia with Necropsy, Dis. Chest 16:103, 1949.

58. Woodward, T. E.; Raby, W. T.; Eppes, W.; Holbrook, W. A., and Hightower, J. W.: Aureomycin in Treatment of Experimental and Human Tularemia, J.A.M.A. 139:830 (March 26) 1949.

59. Ransmeier, J. C.; Price, H. J.; Barnes, Z. B.: Aureomycin in the Treatment of Tularemia, Am. J. Med. 7:518 (October) 1949.

60. Lesser, R. E., and Miller, S.: Ulceroglandular Tularemia Treated with Streptomycin: A Report of Two Cases, New England J. M. 238:554 (April 15) 1948.

61. Greer, W. E. R.: Pulmonary Tularemia in Massachusette, New England J. M. 238:355, 1948.

No Diseases Completely Eliminated

Whether you or I live, suffer or die, depends on our physicians and the weapons that are placed in their hands. The pharmaceutical industry is the principal arsenal of these weapons. In large measure, through the research, skill and know-how that our scientists have patiently developed, we have made more gains in the last half century in the conquest of disease and prolongation of life than has been achieved in the entire 999 centuries of man's previous existence on earth. And yet our work has just begun. Not a single disease has yet been completely eliminated, and so much remains to be done.—Theodore G. Klumpp, M. D., President, Winthrop Laboratories, to House Interstate and Foreign Commerce Committee, August 20, 1962.

Relative Clinical Significance of Food Allergies in Pediatric Allergy

• A description of the controversy on food allergy with outline of reactions presumably due to food. Difficulty of diagnosis is pointed out. Principles of management are given.

ALBERT E. HENSEL, JR., M. D.
Alexandria

Role of Foods

IN allergy, there is considerable controversy on the role of foods as allergens. There are some who would ascribe most symptoms in children not easily diagnosed as allergy in general and food sensitivity in particular.[1] On the other hand, there are those who do not admit food allergy in children exists. As most of us have practiced a general type of medicine, we know how easy it is to manipulate the diet of an infant or child glibly giving allergy the blame for such changes. This "labelling" an infant allergic carries a great deal of responsibility with it because those who are definitely allergic generally develop one or more allergies in later life. We must take every step necessary to ascertain the immunologic basis (Antigen-antibody reaction) of such clinical disturbances if at all possible.

Management of the truly food allergic infant should be directed toward prevention of other allergic diseases later.

Three thousand years ago Lucretius said, "What is food to one may be fierce poison to another".[3] This apparent anaphylactic type of food reaction is still recognized clinically. Pratt has outlined the necessary clinical procedure to make allergy the most likely diagnosis. This is the appearance-disappearance-reappearance of untoward reactions with the administration-elimination-readministration of a pure, or highly refined substance in much smaller quantities than tolerated by most healthy individuals.[4] In a large national study now in progress a diagnosis of "true" milk allergy has been rarely made except on this clinical basis. We cannot prove any clear-cut antibody-antigen reaction in what we have been calling "milk allergy" in the laboratory. In some patients, there seems to be a delay between ingesting a food and onset of anaphylaxis.

Criteria for Diagnosis

Theoretical criteria for the diagnosis of gastrointestinal food allergy have been laid down by Ingelfinger et al.[6] which are:

1. Symptoms are caused by contact with a specific substance innocuous to the bulk of the population.
2. An immune mechanism is evident in pathogenesis.
3. Pathologic or functional changes in the intestine be demonstrated.

He believed that if these laborious criteria could be met in a number of cases, then a clinical pattern might be found that could be more easily correlated by other indirect tests. In the fifteen years since he laid down these criteria we are no closer to proof that antigen-antibody reactions are the basis of clinical symptoms due to food than before.

It has been our feeling that sensitivity to food usually played a minor or contributory role in most respiratory allergies such as perennial allergic rhinitis and/or asthma. On occasion exquisite sensitivity to several or more food proteins may be of major significance in respiratory allergies.[7, 8] Allergic cephalalgia, gastrointestinal allergy, genitourinary allergy, eczema, angioedema and/or hives commonly have foods as a major causative allergen. A word of caution by Hill[9] should be injected here—that not all eczema is caused by food but on occasion by air borne in-

halants or contactants. He feels that too many children are dieted when eczema is due to other causes that have nothing to do with food.

Manifestations due to food seem to be quite common in the infant and young child. As they become older inhalants become more important as offending materials.

Various types of dietary manipulation such as elimination or provocation are used to ascertain the offending food. Outlines for these can be found in most standard textbooks on allergy.

Complications of dietary restrictions (iatrogenic diseases) are:

1. Malnutrition with hypoproteinema produced by an overly zealous parent and/or physician.
2. Iron deficiency anemias.
3. Emotional disorders in the parent as well as child. Food limitations imposed upon a child may interfere with his development of healthy living patterns because he may wonder "Why can't I be like the other fellow."

Management

Management of food sensitivities consists of (1) avoidance of offending materials for as short a period as necessary, (2) symptom relief with medication, and (3) avoidance of emotional disorders brought on by dietary restriction. Hyposensitization to foods is not effective[10] in most instances.

Food allergy is a poorly understood aggregate of immunologic and pathophysiologic reactions. Many incriminated food offenders on first trial appear to be causative but on repetition do not bear out the suspicion. Some manifestations labelled food allergy are probably a variety of enzyme deficiencies (as seen in galactosemia) pharmacodynamic effects, absorption defects, peristaltic changes, and/or coincedence plus wishful thinking.

References

1. Collins-Williams, C.: The Incidence of Milk Allergy in Pediatric Practice, J. Ped., 48:39, 1956.
2. Rosenblum, A. and Matheson, H.: Clinical Conference—Gastrointestinal Food Allergy in Infants, Ped. 29: 153, 1962.
3. Lucretius. Titus: IV, 637.
4. Pratt, E. L.: Food Allergy and Food Intolerance in Relation to the Development of Good Eating Habits. Ped., 21:642, 1958.
5. Morishima, A. and Kessler, W. R.: Food Hypersensitivities? Report of Two Cases with Acute Constitutional Reactions, Ped. 29:129, 1962.
6. Inglefinger, F. J., et al: New England J. Med. 241:303, 1949.
7. McGovern, J. P.: Respiratory Allergy in Childhood in Current Therapy, W. B. Saunders Co., Philadelphia, 1959.
8. McGovern, J. P.: Management of Asthma in Infants and Children, Chicago Med. Soc. Bull., Sept. 5. 1959.
9. Hill, L. W.: Children with Eczema in Pediatric Clinics of N. America., W. B. Saunders Company, Philadelphia 6:781, 1959.
10. Scheer, M. S.: Food Allergy in Children in Current Therapy, W. B. Saunders Company, Philadelphia, p. 393, 1962.

Materials for a Better and Longer Life

Ours is a business which can continue to thrive only through constant technical innovation, through scientific development, through endless search for what is new and better. We feel deeply that the products we make and the services we perform are more than items of commerce—they are the materials for improved health, for a better and longer life. If we fail to provide them, we deprive society of the fruits of scientific achievement.—John E. McKeen, Chairman of the Board and President, Chas. Pfizer & Co., to Annual Meeting of Share Owners, April 30, 1962.

Injuries to the Urinary Tract*

• A discussion of injuries of nonpenetrating, penetrating and the spontaneous types.

J. C. MARSHALL, M. D.
Baton Rouge

PHYSICIANS in most all fields of medicine are confronted with injury to the urinary tract at one time or another. Although these injuries are statistically in the minority as compared to skeletal, abdominal or head injuries, the possibility of occurence must be considered in all injuries that involve the trunk, pelvis or perineum. Therefore, I would like to give a brief discussion of injuries of the urinary tract, with emphasis on injuries to the kidney and bladder.

Kidney

There are several classifications of kidney injuries. Clinically, they can be divided into three main types:

1. Subcutaneous, subparietal or nonpenetrating type.
2. Penetrating type.
3. Spontaneous rupture.

The nonpenetrating type is the most common of the three and the most confusing as to diagnosis and treatment. This type of injury is more common in males and is usually unilateral. An abnormal kidney is more prone to damage from nonpenetrating forces than a normal organ. A hydronephrotic kidney is six times more likely to rupture. Cysts, infarcts and tumors all increase the risk of kidney injury.

Nonpenetrating injuries are produced by direct force over the kidney or by indirect force resulting from forces elsewhere on the body. A third cause is by muscular action such as a sudden contraction of the diaphragm or abdominal muscles as might occur in lifting a heavy object. The actual rupture of the kidney is thought to be due to an increase in hydraulic pressure because of the distention of the living kidney with blood. Injuries are usually at the lower pole because it lies in a more exposed area. The capsule of the kidney offers a great protection against injury and greatly limits the extent of the injury. If the capsule has been previously removed, then an injury to such a kidney might result in complete tears or pulpification. If the capsule is torn in the injury, then considerable damage might result. Therefore it is possible to divide nonpenetrating wounds into two types; subcapsular and transcapsular. Most nonpenetrating wounds are of the subcapsular type.

An important feature of the nonpenetrating injury is the concomitant injuries which occur. Kidney injuries are commonly associated with fractured ribs. In all cases of fracture of the last three or four ribs, one must always think of injuries to the liver, spleen or kidney. Injury of the peritoneum overlying the kidney is common. In such an instance, blood and/or urine would escape into the peritoneal cavity. Adams and Mussleman describe a triad of injury to the spleen and left kidney associated with rupture of the left leaf of the diaphragm. They feel that injury to any one of these demands careful evaluation of the other two.

The penetrating injury is produced by any object piercing the kidney from outside the body. This produces cuts, contusions or detachment of a portion of the organ. In comparison, it actually resembles a transcapsular nonpenetrating wound of the kidney.

Spontaneous rupture of the kidney is a very rare condition that is usually associated with calculous pyonephrosis or tumors, particularly hamartomas.

There will usually be a history of a blow

* Presented at the Eighty-second Annual Meeting of the Louisiana State Medical Society, Monroe, May 9, 1962.

to one side or the other. Fainting within an hour or so is a common symptom and is usually associated with nausea, vomiting, pain and tenderness in the affected side.

The most common clinical picture is that of:

1. Hematuria, which is practically always present. It is usually present immediately after injury, but it may be delayed if the ureter should be blocked by a blood clot.

2. Costovertebral angle tenderness and pain of the affected side are usually present. The pain may be colicky in nature due to the passage of clots in the ureter.

3. Mass. Extravasation of urine or blood leads to tumor formation in the flank. A hematoma may occasionally extend along the posterior peritoneum and present in the pelvis.

4. Peritoneal irritation. This is most severe when there is intra-peritoneal extravasation and produces vomiting and abdominal distention. Extensive intraperitoneal hemorrhage will produce a rapid and severe clinical picture.

5. Shock. This is usually of two types. Immediate shock is due to reflex from trauma. It is usually due to injury of large nerve plexuses around the renal pedicle and the adrenal gland. It is associated with a low blood pressure but a slow pulse. Blood loss shock is associated with a fast pulse.

Table 1 is a summary of the clinical picture presented by 14 cases of nonpenetrating kidney injuries at Confederate Memorial Medical Center in Shreveport, La., since 1953. Hematuria was present in every case. Flank pain was present in 7 cases, shock was present in 2 cases, and a flank mass was palpable in 2 cases. There were four cases of penetrating wounds of the kidney at Confederate Memorial. (Table 2) Three cases had hematuria and 2 cases were admitted in shock. The 1 case without hematuria was a knife wound which produced a laceration of the posterior surface of the kidney.

TABLE 1
KIDNEY INJURIES—NONPENETRATING
CONFEDERATE MEMORIAL MEDICAL CENTER

Number of Cases	14
Hematuria	14
Flank pain	7
Shock	2
Flank mass	2

TABLE 2
KIDNEY INJURIES—PENETRATING
CONFEDERATE MEMORIAL MEDICAL CENTER

Number of cases	4
Hematuria	3
Shock	2

A KUB film is only of limited value. Occasionally one can outline a mass. All patients should have an intravenous pyelogram as soon as possible and, if necessary, a retrograde pyelogram. Some authors feel that a retrograde pyelogram is mandatory if (1) the intravenous pyelogram is not clearly negative; (2) there is a mass in the flank; (3) hematuria persists or recurs; (4) infection intervenes.

Therefore, the diagnosis is based on a history of injury, gross or microscopic hematuria, a flank mass, costovertebral angle tenderness, intravenous pyelogram and possible retrograde pyelogram. One important value of the intravenous pyelogram is its aid in determining the state of the uninjured kidney.

It is difficult to outline a definite method of treatment for renal injuries. The treatment can be divided into two types; expectant and operative. McKay and his associates offer the following classification for treatment. No exploration is needed if there is an intact pyelogram with clear renal and psoas shadows. If there is a rupture of a collecting system with loss of renal or psoas shadows, the kidney should be explored within seventy-two hours. The reason for the seventy-two hour delay is to allow delineation of infarcts so the operator might judge whether the kidney should be salvaged or removed. Sustained shock requires immediate exploration as it probably represents a rupture of the vascular pedicle. Other indications for surgery that have been mentioned are (1) recurrence of severe bleeding after it has ceased for a few days; (2) chills, fever and tumefaction

and (3) if concomitant injury of any other viscera is suspected. In penetrating injuries it has been noted that one third of the wounds involving the right kidney also involve the liver. The same proportion of splenic injury occurs with wounds of the left kidney.

The surgical procedure for all types of kidney injuries is based on the findings at the time of exploration. It ranges from simple drainage and removal of clots to apposition of kidney lacerations, partial or total nephrectomy. This is performed through a flank incision usually. However, abdominal exploration is usually done in cases involving injuries to other organs.

Most cases which do not require surgical treatment return to normal. The chief dangers are death from hemorrhage early and infection later. Anuria occurs only if the injury involves a solitary kidney. However, some cases form hematomas which organize and calcify; renal atrophy; chronic pyelonephritis; hypertension; traumatic hydronephrosis; stones; perinephric abscesses; and urinary fistulae.

Ureter

Ureteral injury from external violence is unusual in civilian practice, but such injuries occur with pelvic fractures, gunshot wounds or penetration by knife or other sharp instrument. These injuries are usually associated with trauma to vital organs. Spontaneous rupture of a normal ureter is exceedingly rare. This occurs usually on the basis of an impacted ureteral calculus gradually eroding all the coats of the ureteral wall.

Hematuria is probably the most significant lead to the urinary system. Intravenous and retrograde pyelograms should be made in all suspected cases.

The treatment, early or late, is surgical. Diversion of the urinary stream and drainage of extravasated urine or repair of the ureter is carried out, depending on the condition of the patient.

Bladder

Injuries of the urinary bladder may be anticipated when trauma to the pelvic girdle or lower abdomen has occurred.

The bladder varies greatly in mass depending on the volume of urine contained. The empty bladder is situated deep in the bony pelvis well protected by the surrounding fascias and muscles, the pelvic girdle, rectum, uterus and fatty pre-vesical areola tissue. It is vulnerable mainly to pelvic fractures. The distended bladder, to the converse, rises above the pubic symphysis and is more liable to rupture or penetrating missles. A ruptured distended bladder is more likely to be intraperitoneal, where as a ruptured empty bladder will probably be extraperitoneal. Injuries associated with alcoholic intake frequently involve the bladder because it is usually distended and the abdominal muscles are relaxed. Except for automobile accidents vesical injuries are more common in males than females. One reason is the greater exposure to trauma of the male and also the added protection of the uterus in the female. It is unusual for a female to sustain an intraperitoneal rupture of the bladder.

There are three main types of bladder injury:

1. Penetrating wounds or injuries due to perforation by sharp or blunt objects. These are more common in military injuries. They should always be suspected in wounds involving the hypogastrium, buttocks or perineum.

2. Nonpenetrating injuries or rupture of the bladder occur by direct external force such as falls, kicks or crushing injuries involving fractures of the pelvis. In 1798 cases of fractures of the pelvis in literature, 181 or 10 per cent had an associated rupture of the bladder. A series of 259 cases of fracture of the pelvis associated with bladder rupture showed 212 or 82 per cent to be extraperitoneal and 47 or 18 per cent to be intraperitoneal.

3. Spontaneous rupture of the bladder occasionally occurs. There is usually some contributing factor such as overdistention

due to alcoholic intake, prostatism, urethral stricture or a diseased bladder.

The symptoms of rupture of the bladder depend on the location and size of the bladder wound, the associated injuries and the lapse of time before the patient is seen. In general, there is severe lower abdominal pain resulting from extravasation of blood and urine. There is tenderness with rigidity of the abdominal muscles, and the patient is usually unable to void. If the rupture is intraperitoneal, the signs and symptoms are shock, hypogastric pain and tenderness with a constant desire to void. This is associated with retention or possible passage of a small amount of blood. Vomiting and other gastrointestinal symptoms are usually not present until peritonitis occurs. If the rupture is extraperitoneal, there may be very few early symptoms. There may be some degree of shock, a desire to void with the passage of bloody urine and pain, which may be localized to the suprapubic region or it can be referred to the perineum, rectum, penis or thighs.

There have been 12 cases of nonpenetrating bladder injuries at Confederate Memorial since 1953. (Table 3) Of these, 11 had gross hematuria on admission, 8 had lower abdominal pain, one patient had urinary retention, 3 were admitted in shock and one case showed extravasation of urine into the scrotum. There have been 3 cases of penetrating bladder injuries, all caused by gunshot wounds. (Table 4) Hematuria was present in all three cases, one patient was unable to void, right lower quadrant abdominal tenderness was present in one case, suprapubic tenderness was present in one case and there was an associated involvement of the rectum in one case.

TABLE 3
BLADDER INJURIES—NONPENETRATING
CONFEDERATE MEMORIAL MEDICAL CENTER

Number of cases	12
Hematuria	11
Shock	3
Lower abdominal pain	8
Inability to void	1
Extravasation into scrotum	1

TABLE 4
BLADDER INJURIES—PENETRATING
CONFEDERATE MEMORIAL MEDICAL CENTER

Hematuria	3
Retention	1
RLQ tenderness	1
Suprapubic tenderness	1
Rectal involvement	1

Early diagnosis is important because of the extravasation and subsequent infection. When bladder injury is suspected, the patient should be asked to void. Urine which is not grossly bloody is a fairly reliable indication that the bladder is intact. Bloody urine requires further examination. Catheterization should be attempted with an indwelling type of catheter because of associated posterior urethral injuries. In both instances, an indwelling catheter in the bladder is of great aid. If clear urine is obtained, again, one can assume no significant bladder injury is present. If the urine is bloody, a retrograde cystogram should be made. This is the most reliable single diagnostic aid in vesical injuries. If the cystogram is negative and the urine is still bloody, an intravenous pyelogram should be made. Other diagnostic aids that have been used in bladder injuries are:

1. Instilling a known amount of water and attempting to recover the same amount. This is unreliable.
2. Air cystogram. If the rupture is intraperitoneal, air will be seen under the diaphragm. It is not always helpful in extraperitoneal ruptures.
3. Intravenous pyelogram. This eliminates the danger of introducing infection, but it does not always result in adequate filling of the bladder.
4. Cystoscopy. This increases the extravasation. Bleeding usually obscures vision and a small wound may be overlooked.

The treatment of vesical injuries is immediate surgical repair of the bladder and peritoneal defects with chromic suture, indwelling catheter, adequate drainage of the perivesical space and antibiotics. If surgical repair is performed within ten to

twenty four hours, the prognosis is good. The mortality mounts rapidly after that time due to peritonitis and sepsis.

Injuries to the posterior urethra occasionally occur simultaneously with bladder injuries. They result primarily from fractures of the pelvic girdle, particularly the pubic rami. Because the membranous urethra and prostate are firmly fixed by their respective fascia and ligaments, injury in this area usually causes a shearing action resulting in laceration or severance of the posterior urethra. Rectal examination reveals a displacement of the prostate upward and a soft boggy hematoma present where the prostate should be.

If a urethral catheter can be passed into the bladder, traction for two to four weeks will be adequate treatment for a urethral injury, if there is no hematoma. If a catheter fails to pass, complete disruption of urethral continuity has occurred which must be re-established. This is accomplished by a suprapubic cystotomy and the use of inter-locking sounds until a catheter can be inserted per urethra into the bladder. Because of the high incidence of stricture formation, strict follow up urethral dilatation for at least one year is a most important part of the treatment.

Injuries to the distal urethra are due most commonly to a saddle type of fall, in which the urethra is between the object striking the perineum and the inferior border of the pubic symphysis. The main signs and symptoms are pain, tenderness, swelling and blood at the urethral meatus. Attempt at voiding increases the pain. Rectal examination is usually negative.

An attempt at catheterization should be done. If successful, an indwelling catheter is adequate treatment. If catheterization is unsuccessful, open surgery must be performed, usually through a perineal incision. If the urethra is severed, continuity is re-established by an end to end anastomosis. All hematomas and extravasation are drained and the urethra is splinted by a catheter for two to four weeks. Again, post-operative dilatation is most important.

Penis

Injuries to the penis are becoming more common due to modern industrial life. The main problem can be divided into those injuries with involvement of the urethra and those injuries without involvement. The treatment in general consists of:

1. Control of hemorrhage.
2. Thorough cleansing and debridement.
3. Surgical closure and plastic repair when necessary.
4. Antibiotics.

Scrotum and Scrotal Contents

The most common injury to the scrotum is contusion which occurs more commonly in athletes. These injuries are of no great importance unless they cause a hematoma. Severe lacerations do occur, particularly in an industrial practice. Scrotal wounds should be treated by recognized surgical principles. Of great importance are the thorough cleansing of the wound and careful hemostasis.

Although the testicles are in a highly exposed location, injuries are comparatively unusual. The most common injury is contusion. The immediate effect of this injury is swelling, ecchymosis, and a severe pain associated with nausea. The testicle is usually enlarged. It can often be confused with torsion of the spermatic cord, acute infection, and a strangulated hernia. This type of injury is usually treated with bed rest, elevation of the scrotum and compresses. Surgical treatment is necessary if hemorrhage is severe or abscess formation occurs. The prognosis is not always good, as atrophy can occur even from a slight injury.

Another less common injury to the testicle is traumatic rupture. This injury is characterized by excessive swelling and hematoma formation. The treatment is exploration and evacuation of the hematoma or orchidectomy depending on the extent of the injury.

Summary

In summary, a discussion of injuries of the urinary tract has been presented. The types of injuries, the most common signs and symptoms of these injuries, the methods of diagnosis, and the current concept of treatment have been discussed. Eighteen cases of kidney injury and fifteen cases of bladder injury at Confederate Memorial Medical Center since 1953 have been reviewed and discussed.

References

1. De Weerd, James H.: Management of Injuries to the Bladder, Urethra and Genitalia. S. Clin. N. America, 39:973 (Aug.) 1959.

2. Heller, Eugene: War Injuries to the Upper Urinary Tract. J. Urol., 72:149, 1954.

3. Heller, Eugene: War Injuries to the Lower Urinary Tract and Male Genitalia. J. Urol., 72:821, 1954.

4. Henkel, H. B.: The Urological Battle Injury in the Korean Conflict. J. Urol., 70:637, 1953.

5. Hodges, Clarence V., Gilbert, Donald V. and Scott, William W.: Renal Trauma: A Study of 71 Cases. J. Urol., 66:627, 1951.

6. Jones, R. Frank: Surgical Management of Transcapsular Rupture of the Kidney: 24 Cases. J. Urol., 74: 721, 1955.

7. Liska, John R.: Recognition and Management of Trauma to the Kidney. J. Urol., 78:525, 1957.

8. Lowsley, Oswald S. and Kirwin, Thomas J.: Clinical Urology, Vol. I and Vol. II. Williams and Wilkins Co., 1956.

9. Lynch, Kenneth M., Jr.: Traumatic Urinary Injuries: Pitfalls in Their Diagnosis and Treatment. J. Urol., 77:90, 1957.

10. Orkin, Lazarus A.: Evaluation of the Merits of Cystoscopy and Retrograde Pyelography in the Management of Renal Trauma. J. Urol., 63:9, 1950.

11. Rolnick, Harry C.: The Practice of Urology, Vol. I and Vol. II. J. B. Lippincott, 1949.

12. Schneiderman, Clarence: Traumatic Rupture of the Testicle. J. Urol., 78:54, 1957.

Safe Drugs for Safe Flying

The use of drugs in flying continues to be of paramount importance (in the Air Force). The flight surgeon should advise, not only aircrew members, but also allied medical personnel that no medication will be taken by aircrew members except under the direct supervision of a flight surgeon. Systemic medications will not be prescribed for pilots unless the individual is grounded for the duration of the effective drugs. Certain exceptions may be noted. Aspirin, APC's, and similar medications may be prescribed without prescription only if the primary disease process is not in itself an adequate cause for grounding. In general, no drugs will be used by an individual while on flying status.—U. S. Air Force Medical Service **Digest**, October 1962.

Therapy of Peptic Ulcer

• A double blind comparison of Poldine Methylsulfate with Butabarbital Sodium and Propantheline Bromide with Phenobarbital.

THOMAS C. ROACH, M. D.†
New Orleans

SINCE its introduction in 1953, propantheline bromide (Probanthine) has become the most widely used drug of its class in the treatment of peptic ulcer. Although a number of investigators have argued that it has no clear cut advantage over belladonna or atropine, it is generally accepted that it has a selective action on the gastrointestinal tract, reducing both gastric secretion and motility with fewer side effects.[1]

Many synthetic anticholinergic compounds have been developed since Probanthine—and its predecessor Banthine—appeared, but few, if any, have seemed to offer a distinct improvement, except perhaps in longer duration of action.

In 1957, poldine methylsulfate (Nacton) was introduced in England. This compound was felt by investigators to have a prolonged atropine-like action, reducing the gastric secretion of hydrochloric acid by about one half without producing noticeable side effects. In addition it was felt that the drug had little or no effect on gastric motility—producing no change in gastric emptying.[2-4]

This drug was recently released here in the United States by McNeil Laboratories. In its most popular form, it has been combined with sodium butabarbital. It has long been a common practice to include some type of mild sedation in an ulcer regimen in view of the emotional factors frequently present. Phenobarbital is by far the most widely used sedative, although a myriad of barbiturates and ataractic agents have been employed. Butabarbital (Butisol) is a barbiturate with an onset of action within thirty minutes and a duration of action of approximately five to six hours. It is reported to avoid the hazard of accumulation or development of tolerance associated with the prolonged administration of Phenobarbital.[5]

There has been a steady increase in the popularity of combined medications in recent years. Of the new products which appear in the pharmaceutical field annually, only a small percentage are new compounds, the majority being new combinations of previously developed drugs. In spite of the obvious loss of flexibility of dosage with the resulting impairment in individualizing each patient's regimen, these combinations are defended as simplifying the regimen, reducing both the number and cost of medications to be taken.

The purpose of this study has been to compare clinically, by means of double blind technique, two combinations of drugs in the therapy of peptic ulcer: propantheline bromide (Probanthine) with phenobarbital, and poldine methylsulfate with sodium butabarbital (Nactisol).

Materials and Method

Twenty-four patients, thirteen males and eleven females, who had active, uncomplicated peptic ulcers proven roentgenologically were used in this study. These included twenty-one duodenal ulcers, two pyloric channel ulcers, and one antral gastric ulcer. Age of the patients ranged between 8 and 48 years.

Two groups of identical-appearing tablets were prepared—one containing propantheline bromide 15 mg. with phenobarbital 15 mg., the other poldine methylsul-

† Department of Gastroenterology — Tulane University School of Medicine, Browne-McHardy Clinic, Touro Infirmary.

Material for this study supplied by McNeil Laboratories, Philadelphia, Pennsylvania.

fate, 4 mg. and sodium butabarbital, 15 mg.

As soon as a definite diagnosis was made the patient was started on one of the two medications, each being assigned alternately. In all but one instance, the initial dosage was one tablet four times daily, before meals and at bedtime. (One patient, age 8, was started on a half tablet four times daily.) Each patient was also placed on six bland feedings per day, plus interval doses of antacids. All patients were treated on an ambulatory basis, none was hospitalized. Criteria for satisfactory response to the medication were disappearance of symptoms with a minimum of side effects. The dosage was adjusted according to the patient's response, being increased or decreased one-half tablet each time as necessary. No antacids were given after the patient retired, persistent nocturnal pain being controlled by increasing the bedtime dosage of the anticholinergic.

After seven days on one medication, the patient was switched to the alternate compound without his knowledge, the balance of the regimen remaining unchanged. At the end of the second week, the diet and antacids were usually liberalized somewhat, and the patient continued on one of the two medications at the most effective dosage until repeat X-ray studies were made six to eight weeks later.

Results

The patients' responses to the two medications were classified as follows:

Excellent: Complete relief of symptoms with no side effects.

Good: Complete relief of symptoms with minimal side effects i.e., slight dryness of the mouth, easily controlled constipation, or mild sedation.

Fair: Relief of symptoms with more marked but tolerable side effects.

Poor: Inadequate relief of symptoms or intolerable side effects.

Eleven patients had excellent results from Nactisol, while eight did excellently on Probanthine/Phenobarbital. Five of these patients did equally well on both medications.

Nine patients had good results from Nactisol and six from Probanthine/Pb.

Fair results were obtained in two patients on Nactisol and nine on Probanthine/Pb.

There were two poor responses to Nactisol and one to Probanthine/Pb.

No patient's daytime dosage of Nactisol had to be increased, but the bedtime dosage in 2 patients with persistent nocturnal pain was upped with relief of the pain but resulting in dryness of the mouth.

However, 5 patients required an increase in both the day and night time dosage of Probanthine/Pb in order to relieve their symptoms, and an additional 2 patients needed an increase in the bed time dosage only. All of these patients developed dryness of the mouth to a varying degree and several also noted either constipation, blurred vision, urinary retention, or increased sedation. The pain was adequately controlled in all instances despite the side effects.

TABLE 1
SUMMARY OF PATIENTS' RESPONSE TO THE MEDICATIONS

	Excellent	Good	Fair	Poor
Poldine Methylsulfate with Butabarbital Sodium				
Given first week	7	4	1	0
Given second week	4	5	1	2
Total	11	9	2	2
Propantheline Bromide with Phenobarbital	3	4	5	0
Given first week	5	2	4	1
Given second week	—	—	—	—
Total	8	6	9	1

Dryness of the mouth was the most frequently noted side effect, occurring to a mild degree in 4 patients on Nactisol and 5 on Probanthine/Pb, and more severely in 1 on Nactisol and 6 on Probanthine/Pb.

Almost half of the patients (11) failed to notice any definite effect of the sedatives included in the formula of the two compounds. If there was an effect on anxiety or nervousness it was mild, indeed. Two patients on Nactisol did feel "more relaxed" and felt they did better because of it.

Ten patients noted sedation to an annoying degree ranging from drowsiness to more marked sedation. Two of these patients were drowsy on both drugs, but were more sedated on phenobarbital. The remaining 8 patients were split evenly between the two drugs, with phenobarbital seeming to produce a slightly greater degree of sedation, although this was difficult to evaluate.

All of these patients seemed to feel that the sedation was undesirable, although this may have been because they were ambulatory.

One patient was not sufficiently sedated by either medication, although the pain was controlled, and additional sedation in the form of Librium had to be given.

The incidence of constipation was low in this series, only 1 patient on Nactisol experiencing this and 2 on Probanthine/Pb. Urinary retention and blurred vision occurred once each on Probanthine/Pb, while nervousness and insomnia occurred in one patient and headache in another on Nactisol.

All of the poor responses were due to side effects from the drugs. The patient with the antral gastric ulcer did well on Probanthine/Pb, but developed acute gastric retention with dilatation on Nactisol. After discontinuing the medication for several days, the retention disappeared and did not recur when Probanthine/Pb was restarted. The second poor response to Nactisol was in a ten year old girl with an acute duodenal ulcer. She did quite well on Probanthine/Pb but developed marked sedation and some gastric retention on Nactisol. Reducing the dosage improved both, but epigastric pain recurred. She did well after being placed back on Probanthine/Pb.

The patient who responded poorly to Probanthine with Phenobarbital became extremely depressed, drowsy and lethargic. Decreasing the dosage resulted in a recurrence of pain. She had done well previously on Nactisol, and she was restarted on this with good results.

Twelve patients had a more satisfactory response to Nactisol, all factors considered, and received this drug for the balance of the course of therapy until follow-up films were taken. Five did better on Probanthine/Pb and in seven there was no difference. The latter two groups were placed on Probanthine/Pb.

All of the patients of both groups responded with satisfactory healing of the ulcer on X-ray within two-three months except for three long-term chronic ulcer patients whose symptoms subsided, the crater disappeared, but scarring of the bulb remained.

TABLE 2
SUMMARY OF SIDE EFFECTS

	Nactisol	Proban-thine/Pb
Dryness of mouth—mild	4	5
Dryness of mouth—severe	1	6
Constipation	1	2
Blurred vision	0	1
Urinary retention	0	1
Headache	1	0
Gastric retention—marked	1	0
Gastric retention—mild	1	0
Sedation—mild	5	3
Sedation—marked	1	3
Nervousness, insomnia	1	0
Depression	0	1

Comment

In this study, Nacton seemed to be the slightly more effective, better tolerated drug, but the series is certainly too small for any definite conclusion to be reached. Individual response to the drugs varied widely. Probanthine produced a definitely greater incidence and degree of dryness of the mouth in dosages adequate to relieve symptoms, but dryness of the mouth was also noted in some patients on Nacton

and it was necessary on two occasions to push the dosage until this was achieved before nocturnal pain would subside.

Previous investigators' observations that Nacton has little, if any effect, on gastric motility seem to be belied somewhat by the occurrence of one instance of marked gastric retention, and another of a lesser degree in this series. In both cases, retention did not occur on Probanthine.

The relative merits of Phenobarbital versus Butabarbital were not clear. The incidence of excessive sedation was the same, although Phenobarbital seemed to produce a greater degree of drowsiness and lethargy.

The routine use of a combination of a sedative and anticholinergic in the same tablet can be questioned. While in the majority of patients, the combinations were well tolerated, predictably in some it proved a hindrance, increasing the incidence of side effects and necessitating a decrease in the dosage of the anticholinergic below the optimum level with unsatisfactory results. Whether the sedation really offered very much in the therapy of some of the patients was also questionable.

It would seem to be preferable to evaluate each patient's need for anticholinergic and sedative therapy individually and prescribe the medications accordingly.

Summary

1) Twenty-four patients with active, uncomplicated peptic ulcers were treated in a double blind study with poldine methylsulfate with butabarbital sodium (Nactisol) and propantheline bromide (Probanthine) with phenobarbital.

2) Poldine methylsulfate appeared to be as effective an anticholinergic as propantheline bromide, and perhaps slightly better tolerated. The latter compound did seem to definitely produce a greater incidence and degree of dryness of the mouth in an effective dose. With this exception, the incidence of side effects was approximately equal.

3) There was no clear cut advantage of butabarbital sodium over phenobarbital as a mild sedative in these patients.

4) The routine use of a combination of sedative and anticholinergic in the same tablet is questioned.

References

1. Goodman & Gilman: 2nd Ed. Pharmacological Basis of Therapeutics pp. 562-564.

2. Douthwaite, et als.: A long-acting inhibitor of gastric secretion, Brit. Med. J. 2:275 (Aug. 3) 1957.

3. Douthwaite, et als.: Effect of "Nacton" in patients with duodenal ulcer, Brit. Med. J. 1:1030 (May 3) 1958.

4. Douthwaite, et als.: Long-continued inhibition of gastric secretion by poldine methosulphate in patients with peptic ulcer, Brit. Med. J. 1:1575 (June 3) 1961.

5. Batterman, et als.: Clinical Re-evaluation of Daytime Sedatives, Postgraduate Med., Vol. 26, No. 4 (Oct.) 1959.

Good Judgment in Drug Therapy

We are all too human — members of the health professions, drug manufacturers, advertising agencies, sick people, and all the rest of us who are trying to live happily — and often our emotions get in the way of our good sense. When it comes to drugs, it might be wise to let the experts in the field tell us what it's all about, and then use our own good judgment in deciding whether the risk of the drug outweighs the risk of the disease. There is risk both ways, and this we must understand. — Chauncey D. Leake, Ph.D. in **Medical Tribune**, September 10, 1962.

An Evaluation of the Muscle Relaxant Properties of Librium*

• Use of the drug was studied in seventy patients with spastic disorders and the results are given.

JACK WICKSTROM, M. D.
RAY HADDAD, M. D.
New Orleans

WITHIN the past two years a vast number of studies have established the psychodynamic properties of Librium, but only scant attention has been paid to its potential as a muscle relaxant. Still, the early pharmacologic data had shown that as a muscle relaxant it was markedly more potent than meprobamate or the barbiturates,[1-3] and ensuing observations in convulsive and agitated patients have been encouraging.[4, 5] We became interested in Librium after noting the significant results obtained by a group of orthopedic patients who were given the drug in an emergency room setting for the control of muscle spasms. In general, Librium appeared to be a satisfactory muscle relaxant, the response and dosage varying greatly with the individual. In view of this experience it was felt that a critical evaluation of the muscle relaxant properties of Librium was warranted, and, therefore, we set out to investigate the drug more thoroughly using the double-blind technique.

Materials and Methods

Seventy patients with painful spastic disorders associated with fractures, bone disease, and musculoskeletal trauma were selected for the study. They were divided randomly into two groups of 35 patients each, one group receiving drug A and the other drug B for from one to two weeks. At the time of the study neither patient nor doctor know which drug was Librium and which the inert placebo.

Group A included 18 men and 17 women, whose ages varied from 18 to 69 years, the average age being 42.5 years. The diagnostic categories are given in Table 1. Two patients had received previous medication, chlormezanone and chlorzoxazone, but during the study no adjunctive systemic medications were administered. These patients received drug A in doses of 1 capsule (10 mg.) three times a day with concomitant physical therapy including bed rest, heat, traction, cervical collars, lumbosacral support, etc.

TABLE 1
THE DIAGNOSTIC CATEGORIES AND RESULTS IN PATIENTS TREATED WITH DRUG A (LIBRIUM)

Diagnosis	No. Patients	RESULTS Good	Fair	Poor
Muscle strain	8	5	2	1
Fractures	6	4	2	
Osteoarthritis	5	3	2	
Ruptured intervertebral discs	4	3	1	
Herniated nucleus polposus	1	1		
Muscle spasm (uncomplicated)	4	3		1
Low back pain	2	1	1	
Sprain	2	2		
Postoperative muscle spasm	1	1		
Dislocated hip	1	1		
Aseptic necrosis	1	1		
TOTALS	35	25	8	2

Group B consisted of 20 men and 15 women, whose ages varied from 19 to 77 years, the average age being 46.5 years. The diagnoses were similar to those in group A (see Table 2) and some of the subjects had also received previous medication including chlormezanone in 2 patients and carisoprodol in 1. Drug B was also administered in doses of 1 capsule

* Trade name for chlordiazepoxide, Hoffmann-La Roche Inc., Nutley, New Jersey.

TABLE 2
THE DIAGNOSTIC CATEGORIES AND RESULTS IN PATIENTS TREATED WITH DRUG B (PLACEBO)

Diagnosis	No. Patients	RESULTS Good	Fair	Poor
Muscle strain	13	3	4	6
Osteoarthritis	6		2	4
Fractures	5	1	2	2
Sprains	4	2		2
Ruptured intervertebral discs	2		1	1
Muscle spasm (uncomplicated)	2		2	
Spondylolisthesis	2			2
Postoperative muscle spasm	1			1
TOTALS	35	6	11	18

(10 mg.) three times a day and, as in Group A, adjunctive therapy (remained the same, i.e. elimination of all systemic medications but continued) was limited to physical therapeutic measures.

After all the 70 patients had been treated and their responses determined, a third group was formed including 19 of the patients previously treated with B and 4 treated with A who had failed to show adequate response to the previous therapy. These 23 patients (9 men, 14 women) ranged in age from 23 to 72 years, average age 46 years, and most of the diagnostic categories seen in groups A and B were also found in this group. (See Table 3). After a brief wash-out period these patients were given known Librium, 10 mg. three times a day for one to two weeks, with the same concomitant therapy as during previous therapy. The results obtained in this group were compared to the earlier ones both for the group and individually for each patient.

Results

In evaluation of the results both subjective and the objective elements were taken into account. Thus, not only were the clinical results carefully noted, but each patient was asked his opinion of the drug used in his care and whether he considered it useful in relieving pain, tension, discomfort, and so on; attention was also paid to all side effects and their possible influence on the patient's response. In

TABLE 3
THE DIAGNOSTIC CATEGORIES AND RESULTS IN PATIENTS WITH KNOWN LIBRIUM

Diagnosis	No. Patients	RESULTS Good	Fair	Poor
Previously treated with Drug A*:				
Osteoarthritis	1	1		
Muscle strain	1		1	
Fracture	1	1		
Herniated nucleus polposus	1	1		
Previously Treated with Drug B**:				
Muscle strain	6	1	2	3
Osteoarthritis	5	1	3	1
Sprain	3	1	1	1
Ruptured intervertebral disc	1		1	
Spondylolisthesis	2	1	1	
Fracture	1			1
Spasm	1		1	
TOTALS	23	7	10	6

* Response to known Librium was the same as to previous drug A (Librium).

** Nine patients showed a better response to known Librium than to drug B.

grading the results we avoided using the term "excellent" because it implies complete eradication of a disorder, and Librium and the placebo were being given only as muscle relaxant therapy and were not expected to affect the underlying pathologic changes. We, therefore, limited ourselves to the terms "good"—when there was complete control of the spasms and a definite reduction, if not elimination, of pain and tension; "fair"—when there was an appreciable alleviation in these symptoms, and "poor"—when there was little or no change, or the side effects were incapacitating.

The results for the groups treated with drugs A, B, and the known Librium are summarized in Tables 1, 2, and 3 respectively. The response to A, which was later identified as Librium, was overwhelmingly favorable, with only 2 patients showing less than adequate relief. Most of the patients were favorably impressed with this agent, voicing great satisfaction with it and asking for more medication when their supply was exhausted. Particular benefits were observed in persons with strong symptoms of anxiety-tension for

whom allayment of fears facilitated relaxation—an important factor when a patient is being maintained in traction. There were some side effects; 8 patients experienced drowsiness, 2 dizziness, and 1 increased libido, but at no time did these reactions necessitate termination of therapy. In most instances a slight reduction in dosages reduced the severity of the side effects.

With drug B, the placebo, approximately half of the subjects failed to show any improvement. These subjects were less spontaneous in voicing their opinions and only 1 woman asked for more medication when her supply was used up. Although 2 men stated that the pain returned when the agent was not taken, 2 others said it made them feel worse. Only 5 patients had side effects which included ataxia, urticaria, drowsiness and increasing nervousness; however, these reactions were moderately severe in 3 of them, and necessitated withdrawal of the drug in 1. It was also significant that reducing the number of capsules per day did not alter the severity or occurrence of these reactions.

Of the subjects placed on known Librium, 6 did not respond at all, 5 observed little subjective difference between Librium and the placebo, although there was some clinical improvement, and 1 who was unaware of any difference between the two agents showed significant clinical improvement; 9 of those treated with drug B obtained definitely superior results with the known drug. However, 1 patient preferred the placebo to Librium. At the same time, the 4 patients previously treated with A showed the same response to the drug as before.

As for the side effects, 5 patients became drowsy, 2 dizzy and 1 ataxic. Although these patients were instructed to reduce their daily intake, 3 of them preferred the side effects to a lowering of the dosage, and only 1 had to discontinue therapy because of the severity of the reaction.

Discussion

Evaluating a double-blind study can be a delicate problem, particularly when there are subjective and elusive symptoms or a special need for emotional support.[6-9] In musculoskeletal disorders, for instance, the symptoms, although essentially organic in origin, can be subjectively exaggerated by increased emotional tension. The mounting restlessness and discomfort caused by the use of casts, braces, and traction, plus restriction of activity are unavoidable sources of irritation for the patients. Most of them are inclined to become tense and anxious, developing an acute awareness of pain and discomfort as well as a tendency to exaggerate the symptoms. For these patients encouragement and emotional support will go a long way toward improving their clinical picture, and in this respect the influence of a placebo should not be underestimated. Furthermore, some persons are notoriously susceptible to suggestion, particularly when it can be attributed to a concrete, though in some way mysterious, object such as a pill or injection. Consequently, in the present study those patients with a strong need for emotional support were bound to attach exaggerated powers to the capsule, particularly since the concomitant therapy consisted of bed rest, heat, braces and other equally prosaic and undramatic measures. This may account for those patients who claimed that the placebo alone could control their pain although there was no clinical improvement. Similarly other patients reacting negatively but nevertheless emotionally to the placebo, developed side effects ranging from mild drowsiness to moderate ataxia and urticaria and unhesitatingly ascribed them to the medication.

On the other hand, we had no doubt that in all the patients the principal symptom under investigation, i.e. muscle spasm, was of organic origin and in every case attributable directly to trauma or disease. We were, therefore reasonably certain that improvement in this respect would not be overly influenced by the emotional factors and that an objective evaluation could be

reached. The results obtained would appear to confirm our premise.

To begin with, for some time prior to revealing the codes, we had become aware of certain differences in the responses to the two medications. In group A there was little difficulty in establishing the results. The patients either responded well or not at all. They appeared eager to give their opinions, offering their comments freely and enthusiastically, rarely waiting to be questioned. On the other hand, in group B, there was little correlation between the claims of the patients and the observable clinical results, both tending to be somewhat vague and indefinite. With few exceptions the subjects showed considerable reticence and hesitated to volunteer anything more specific than that they felt or thought they felt "a little better". Later, when we administered the known Librium, the same clear-cut differentiation between response and lack of response became apparent.

Statistical examination of the results of the 3 groups points to the efficacy of Librium. The difference between the 2 patients unresponsive to Librium (blind) and the 18 unresponsive to the placebo is too great to be attributed solely to chance or emotional reaction. The same can be said concerning the 9 patients who showed definite improvement under Librium but not under the placebo. In addition, some patients who felt little or no subjective reaction to Librium, either in the known or the unknown form, nevertheless exhibited appreciable clinical improvement with the active drug, while the few notable improvements following use of the placebo occurred only when there was a marked emotional response; this was characterized primarily by a decrease in pain and restlessness rather than by decreased muscle spasm.

Still it may be argued that these conditions were self-limiting and therefore improvement would have occurred with or without the benefit of a muscle relaxant. Granting that this may have been the case in some instances, it would appear highly improbable that all the beneficial effects in the Librium-treated groups were ascribable to self-limitation, or that in the randomized selection of patients the majority of self-limiting disorders fell into the Librium group.

We have also had limited experience using Librium in situations where the use of a placebo or any controlled technique is either not possible or not feasible. For example, we have attempted to use intramuscular Librium for the treatment of orthopedic disorders seen in an emergency unit. The conditions treated have been purposely limited to fractures and dislocations, and though a double-blind technique is unjustified in these circumstances, it can be stated that the disorders were severe and definitely not self-limiting within the short observation period allowed. The Librium dose varied from 25 to 75 mg., the lower ones being used when an adjunctive opiate or strong analgesic was also administered. The follow-up observation was always made within 24 hours, preferably sooner, and was concerned mainly with the degree of muscle relaxation achieved. The results in the first 11 patients treated are summarized in Table 4. While these are in no way conclusive they are strongly indicative of Librium's muscle relaxant potential when self-limitation is not a factor. More extensive data should be obtained for definitive evaluation of Librium in this respect.

It would thus appear that Librium is a potential muscle relaxant with a broad area of application in orthopedics. Its highly flexible dorage range makes possible careful tailoring of the schedule to fit the individual's needs, and the occasional side effects are rarely incapacitating and easily controlled by adjustment of the daily intake. In addition, its psychophysiologic properties add to its efficacy since they tend to allay the anxiety-tension which so often accompanies orthopedic disorders. We strongly recommend further investigation of the muscle relaxant properties of Librium and of its various applications in the field of orthopedics.

TABLE 4
DIAGNOSTIC CATEGORIES AND RESPONSES OF 11 PATIENTS TREATED WITH INTRAMUSCULAR LIBRIUM IN AN EMERGENCY ROOM SETTING

Pt. #	Diagnosis	Dose	Other Therapy	Good	Fair	Poor	Comments
1	Dislocated shoulder	75 mg.			x		Patient intoxicated, no narcotics used in reduction
2	Fractured humerus	75 mg.	Demerol	x			Sharp fall in muscle spasm
3	Dislocated shoulder	25 mg.	Morphine		x		Difficult to evaluate because of patient's age (57)
4	Dislocated shoulder	25 mg.	Morphine	x			Decreased anxiety and muscle spasm aided reduction
5	Colles fracture	25 mg.	Xylocaine 5%		x		(?) dose too small
6	Fractured humerus	50 mg.			x		Patient "thinks" pain decreased, difficult to evaluate because of patient's age (57), and state of intoxication
7	Fractured humerus	25 mg.	Morphine			x	No appreciable change
8	Fractured femur	50 mg.	Morphine	x			Marked improvement in spasm and pain
9	Dislocated shoulder	50 mg.	Morphine	x			Marked improvement in pain and spasm, fairly easy reduction in muscular man
10	Fractured forearm	75 mg.		x			Very good result in a difficult fracture
11	Acute lumbosacral strain	75 mg.		x			Very good result, patient able to sit within half hour after injection
			TOTALS	6	4	1	

Summary

A double-blind study was carried out on 70 orthopedic patients to determine the muscle relaxant potential of Librium. Ninety-five per cent of the patients who were administered the active drug obtained adequate relief as opposed to 48 per cent of the placebo-treated group. Subsequently, 4 patients previously receiving the active but unknown agent maintained the same responses when given the known drug, while 9 out of 19 patients previously administered the placebo obtained definite improvement with the known drug.

Side effects occurred in both the Librium and the placebo-treated groups. Decreasing active drug controlled all but 1 of the reactions, but in the placebo group adjustment of the schedule in no way affected the side effects, suggesting they were subjective in nature.

In addition data are presented on the use of intramuscular Librium in an emergency room setting.

It is strongly suggested that this and other uses of Librium in orthopedics be further investigated.

References

1. Randall, L. O.: Pharmacology of methaminodiazepoxide, Dis. Nerv. Syst. 21(Suppl.):7 (March) 1960.

2. Kaim, S. C. and Rosenstein, I. N.: Anticonvulsant properties of a new psychotherapeutic drug, Dis. Nerv. Syst. 21(Suppl.):46, (March) 1960.

3. Keith, E. F. and Ardoline, G. A.: Anticonvulsant action of methaminodiazepoxide HCl. Fed. Proc. 19:263, 1960.

4. Ticktin, H. E. and Schultz, J. D.: Librium, a new quieting drug for hyperactive alcoholic and psychotic patients, Dis. Nerv. Syst. 21(Suppl.):49 (March) 1960.

5. Rosenstein, I. N.: A new psychosedative (Librium) as an anticonvulsant in grand mal type convulsive seiz-

ures, Dis. Nerv. Syst. 21(Suppl.):57 (March) 1960.

6. Beecher, H. K.: Increased stress and effectiveness of placebos and "active" drugs, Science 132:91 (July) 1957.

7. Trant, E. F. and Passarelli, E. W.: Placebos in the treatment of rheumatoid arthritis and other rheumatic conditions, Ann. Rheumat. Dis. 16:18 (March) 1957.

8. Lasagna, L., Laties, V. G. and Dohan, J. L.: Further studies on the "pharmacology" of placebo administration, J. Clin. Invest. 37:533 (April) 1958.

9. Forrer, G. R.: The placebo in modern medicine, Med. Times 89:413 (April) 1961.

A Threat to Industrial Research

No industry has immunity against legitimate congressional investigation. So far as we know, the drug industry has claimed no such immunity. But there is a clear responsibility that congressional investigation must be fair and accurate and just. It must disclose a full and true picture, not a partial picture or a distorted picture. And directly related to every phase of drug prices is the cost of drug research. The legislators should be careful to do nothing that will result in a curbing of industrial research, which is as much in the public interest of all the people as in the private interest of the manufacturers. —Editorial in New Brunswick (N.J.) **Home News.**

The Journal of the Louisiana State Medical Society

Established 1844

Published by The Journal of the Louisiana State Medical Society, Inc. under the jurisdiction of the following named Journal Committee:

Ralph H. Riggs, M. D., Ex-Officio
C. M. Horton, M. D., Chairman
Sam Hobson, M. D., Secretary
Edwin H. Lawson, M. D.
J. E. Knighton, M. D.
M. D. Paine, Jr., M. D.

EDITORIAL STAFF

PHILIP H. JONES, M. D., Editor

COLLABORATORS—COUNCILORS

Nicholas J. Chetta, M. D.
J. E. Clayton, M. D.
Guy R. Jones, M. D.
C. E. Boyd, M. D.
Henson S. Coon, M. D.
John L. Beven, M. D.
J. Y. Garber, M. D.
R. E. C. Miller, M. D.

C. GRENES COLE, M. D., General Manager
1430 Tulane Avenue

Subscription Terms: $4.00 per year in advance, postage paid, for the United States; $5.00 per year for all foreign countries belonging to the Postal Union.

News material for publication should be received not later than the eighteenth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

Manuscripts should be addressed to the Editor, 1430 Tulane Ave., New Orleans, La.

The Journal does not hold itself responsible for statements made by any contributor.

Editorial

Nonpolioviruses and Paralytic Disease

The association of paralytic disease with infection by nonpolioviruses is a matter of great clinical importance. It is fitting that an understanding of these relationships should be general because of its bearing on clinical diagnosis and because there is need for proper differentiation of the various forms of paralytic disease in order that polio vaccine should not be blamed for the disease states that it did not produce. An article by Magoffin and Lennette,[1] published in June 1962, is highly informative in this field. There is presented a brief review of the subject and also a report on two groups of patients studied for clinical poliomyelitis. It is evident that the clinical picture of poliomyelitis can be due to or associated with many viruses which are not polioviruses.

Sabin,[2] in a recent article published since the acute concern occurring last fall in regard to the unproven possibility of there being an exceedingly small risk associated with oral poliovirus vaccines, emphasizes that a clinical diagnosis of paralytic poliomyelitis, particularly in sporadic cases, is not synonymous with a diagnosis of disease caused by polioviruses. He states further that in recent years certain Coxsackie A, Coxsackie B, ECHO, and even mumps viruses have been proved to cause paralytic illnesses, indistinguishable from the clinical spectrum of paralytic polio. He also mentions that diagnostic problems are still presented by motor neuritis of unknown etiology, acute infectious polyneuritis with or without the albumino-cytologic dissociation of Guillain-Barré, and postinfectious or acute disseminated myelitis or encephalomyelitis without distinctive sensory manifestations.

Magoffin and Lennette[1] also mention that measles, rubella and chickenpox may produce involvement of the central nervous system manifesting as encephalitis or encephalomyelitis. Miller, Stanton and Gibbons[3] state that the incidence of postinfectious encephalomyelitis following the common childhood exanthemas as approximately 1 in 700 cases of measles, 1 in

6,000 cases of rubella and 1 in 6,000 to 10,000 cases of chickenpox.

Herpes simplex in primary infections may involve the central nervous system producing variable manifestations, among them paresis of muscle groups.

Magoffin and Lannette[1] compiled a summary of reports concerning the human enteroviruses which now include some 60 different agents. The enteroviruses are divided into four major groups: polioviruses (3 types), group A Coxsackie viruses (24 types), group B Coxsackie viruses (6 types) and ECHO viruses (29 types). It is stated that each virus type is antigenically distinct. The laboratory diagnosis of an enterovirus infection generally rests upon recovery and identification of the specific viral type augmented by antibody assays for the type of virus recovered.

Several types of Coxsackie and ECHO viruses have been implicated in illnesses resembling paralytic poliomyelitis, ranging in severity from slight paresis to severe and fatal bulbospinal disease, and also in serious encephalomyelitic syndromes.

The two authors[1] report on 706 patients with clinical paralytic poliomyelitis by vaccination status. Poliovirus was found in 62 per cent of the whole group and in 80 per cent of the group who had not received Salk vaccine. Percentage in the group of positive poliovirus among those who had received Salk vaccine declined progressively to 37 among those who had received three doses. The percentage of non-poliovirus identified in these same patients was 4 per cent in those who received no Salk vaccine and 15 per cent in those who had received three doses. In 18 per cent of the 706 cases the presence of poliovirus was neither confirmed or ruled out, in 10 per cent all tests were negative and in 73 cases, about 10 per cent, evidence of recurrent infection with some other virus was elicited. These other viruses included Coxsackie group B virus in 29 cases (4 per cent), Coxsackie group A virus in 3 cases (less than 1 per cent), and ECHO virus in 22 cases (3 per cent), the mumps virus in 13 cases (2 per cent), the virus of herpes simplex in 6 cases (1 per cent) and the St. Louis encephalitis virus in one case.

The authors comment that the Coxsackie and ECHO viruses have frequently been recovered from apparently healthy persons and have been associated with various clinical syndromes in addition to the disorders of the central nervous system considered here. While the demonstration of infection with one of these agents during the course of an illness in a patient with central nervous system disorder does not constitute proof of a cause or relationship, the authors feel that there is convincing evidence that certain types of Coxsackie and ECHO viruses have the capacity to produce neurological disease which may clinically simulate poliomyelitis.

On the basis of experience in their laboratory they state that viruses other than poliovirus might account for about 10 per cent of the illnesses considered clinically to be cases of paralytic poliomyelitis, predominantly cases with slight degrees of paresis. Similar relationships have been observed by other investigators. They conclude that while there is substantial evidence that viruses other than poliovirus are the causative agents of illnesses clinically simulating paralytic poliomyelitis, nonpolioviruses have not been demonstrated to be major contributors to the overall occurrence of paralytic diseases in recent years.

These observations are of vast importance in our attempts to properly evaluate incidence of so-called poliomyelitis paralysis which may be reported in relation to the mass polio vaccination campaigns. When it is realized that as much as 10 per cent of the paralysis may be due to the nonpoliovirus and that such infection and paralysis tends to go up in proportion when actual polio goes down, clinicians and laboratory investigators should be cautious as to the clinical and laboratory

diagnosis of a paralysis as being that of poliomyelitis after vaccination with either Salk or Sabin oral vaccine.

[1] Magoffin, Robert L., and Lennette, Edwin H.: Nonpolioviruses and Paralytic Disease, California Medicine 97:1 (July) 1962.

[2] Sabin, Albert B.: Is There an Exceedingly Small Risk Associated with Oral Poliovirus Vaccine?, JAMA 183:136 (January) 1963.

[3] Miller, H. G., Stanton, J. B., and Gibbons, J. L.: Parainfectious encephalomyelitis and related syndromes, Quart. J. Med. (Oxford), 25:428-505, 1956.

ORGANIZATION SECTION

The Executive Committee dedicates this section to the members of the Louisiana State Medical Society, feeling that a proper discussion of salient issues will contribute to the understanding and fortification of our Society.

An informed profession should be a wise one.



RALPH H. RIGGS, M. D.
President
1962 - 1963

Dr. Ralph H. Riggs, our President for the past year, has conducted the affairs of the Society in a most efficient and capable manner. In his every action, it was plainly evident that he always had your best interests uppermost in his mind and heart. He has been exceptionally active, having visited most of the larger and more active component parish and district societies and has created good public relations and stimulated interest of the members in our Society. He has, in all his decisions and deliberations, acted for the best interests of the free enterprise practice of medicine. Dr. Riggs has spoken out in no uncertain terms against the socialization of our profession and has strongly opposed the King-Anderson legislation proposed and supported by President Kennedy. The Kerr-Mills Law so successfully implemented in Louisiana has had his wholehearted support.

Dr. Riggs has represented our Society at many meetings, including both medical and civic organizations, thereby carrying our problems to the people, and requesting their support in defeating national legislation which is intended to socialize our profession.

Dr. Riggs was born in Kingston, Louisiana on May 6, 1905, and received his pri-

mary education in the Kingston Grammar School and attended Centenary College at Shreveport and Vanderbilt University at Nashville to complete his academic education.

Dr. Riggs entered Tulane Medical School in 1924, receiving his M. D. degree in 1928 and was licensed to practice his chosen profession on June 16, 1928.

Dr. Riggs' specialty is Otolaryngology, having completed his study for this specialty at Brooklyn Eye and Ear Hospital from 1929-1931 and has practiced this specialty in Shreveport for the past thirty-two years.

Dr. Riggs is a member of many local and national organizations, including the Shreveport Medical Society, Louisiana State Medical Society, American Medical Association, Southern Medical Association, American Academy of Ophthalmology and Otolaryngology, and the American Laryngological, Rhinological and Otological Society. He is a Past President of the Shreveport Medical Society, Louisiana-Mississippi Ophthalmological and Otolaryngological Society, Arkansas-Louisiana-Texas Academy of Medicine and the American Rhinologic Society.

Dr. Riggs is a Fellow of the American College of Surgeons and a Diplomate of the American Board of Otolaryngology.

The Shreveport Club, Shreveport Country Club and the Shreveport Chamber of Commerce are some of the civic organizations in which he enjoys membership.

His hospital appointments include membership on the staffs of the Confederate Memorial Medical Center, Doctors' Hospital, Physicians and Surgeons Hospital and the T. E. Schumpert Memorial Sanitarium located in the City of Shreveport.

His military service includes four years in the United States Navy, having served as a Commander.

Dr. Riggs is the author of many medical papers. Lack of space will not permit listing the titles of these articles.

Dr. Riggs served as a delegate from the Louisiana State Medical Society to the American Medical Association prior to his election as President of the State Society.

Dr. Riggs married Miss Peggy Owens of Carthage, Texas in 1933 and this union has been blessed with two daughters, Susan and Sarah Jane.

We sincerely congratulate Dr. Riggs and thank him for conducting the Society's business in such an efficient manner for the past year.

FINANCING FURTHER PROGRESS*

George Bugbee, Director

Each person in this Country is spending on the average two and a half times as much for all forms of medical and dental care as thirty years ago, measured in dollars adjusted to the same value. Health expenditures represent a steadily increasing percentage, now about 6.6 per cent, of all personal income, and the public has been very conscious of this increase.

There have been higher charges for hospital care and physicians' services at the same time that there has been an increased use of such services, as well as of drugs and dental care. Moreover, the public does not always choose to be economical in the use of medical care, which in part explains higher expenditures. People often select a private or semi-private hospital room instead of a ward. Physicians are consulted more than necessary by some people for reassurance. Drugs are often taken to avoid discomfort that could be endured. Every community wants a hospital, though fewer units centrally located would be less expensive, if less convenient.

On the other hand, there is evidence that too many people are not receiving the best care available. Many people delay or avoid dental treatment. Many fail to see their physicians regularly. Cost, or worry about cost, is important, but much unmet need results from fear and procrastination. If the public were to seek all services needed, expenditures would be greater than at present.

Total expenditures for medical care, then, to some substantial degree represent individual decision by consumers. There are emergencies that remove individual choice, but most medical care is dependent on the individual's deciding to consult a physician and to follow his advice. Wise use of medical care does result in generous use of services and facilities. While many may

* *Reprinted from Health Information Foundation, Vol. XII, No. 1, Jan.-Feb., 1963.*

avoid treatment, rising public expenditure reflects the public's decision to make increasing use of the available services and facilities.

The financing of medical care in this Country has been flexible because payments come from many sources: from government at all levels, primarily from individuals, and increasingly through health insurance. There is inherent adaptability in these many sources of payment for medical care which are directly influenced by consumer's choices. The growth of expenditures represents these consumer decisions on the value of modern medical care. And the resulting flow of funds has financed the facilities needed for progress in providing good health services.

MEDICAL NEWS SECTION

CALENDAR

PARISH AND DISTRICT MEDICAL SOCIETY MEETINGS

Society	Date	Place
Ascension	Third Tuesday of every month	
Calcasieu	Fourth Tuesday of every other month	Lake Charles
East Baton Rouge	Second Tuesday of every month	Baton Rouge
Jefferson	Third Thursday of every month	
Lafayette	Second Tuesday of every month	Lafayette
Lafourche	Last Tuesday of every other month	
Morehouse	Third Tuesday of every month	Bastrop
Natchitoches	Second Tuesday of every month	
Orleans	Second Monday of every month	New Orleans
Ouachita	First Thursday of every month	Monroe
Rapides	First Monday of every month	Alexandria
Sabine	First Wednesday of every month	
Tangipahoa	Second and fourth Thursdays of every month	Independence
Second District	Third Thursday of every month	
Shreveport	First Tuesday of every month	Shreveport
Vernon	First Thursday of every month	

RITES HELD RECENTLY FOR DR. JOHN A. MAJORS

Funeral services were held recently in Dallas for Dr. John A. Majors, Chairman of the Board of J. A. Majors Co. Dr. Majors had lived in Dallas 50 years and was the owner of the firm which has sold medical books since the early 1900's. He was well known and will be missed by all members of the Louisiana State Medical Society.

I.M.&S. AWARD

Industrial Medicine and Surgery, the International Journal of Medicine in Industry, announces a competition for the I.M.&S. Award of $1,000 for the most outstanding original manuscript submitted to the Journal in 1963 devoted to the topic, "The Future of Health in Industry."

Any person, anywhere, may participate in this competition, excepting only members of the staff of **Industrial Medicine and Surgery.** Three judges of national prominence will appraise all manuscripts and decide on the winner. Their decision will be final. All entries become the property of the Journal and may be considered for publication.

For further information, write **Industrial Medicine and Surgery, P.** O. Box 306, Tamiami Station, Miami 44, Florida.

MLA SWITCH IN CONFERENCE PLAN

The 1965 annual conference of the Medical Library Association will be held in Philadelphia, May 30-June 3, 1965. The 1966 annual conference will be held in Boston, June 6-10, 1966. Mr. Elliott H. Morse of the College of Physicians of Philadelphia is chairman of the Philadelphia meeting and Mr. Ralph T. Esterquest of the Harvard Medical Center is chairman of the Boston meeting.

Please make these changes in your meeting date schedule.

COMBATING CHOLESTEROL

Elmer Wheeler, the Calorie's successful opponent, chronicles his fight against cholesterol in "The Fat Boy Goes Poly-Unsaturated," published on March 15th by Doubleday.

Mr. Wheeler has written books on the problem of poundage **per se,** "The Fat Boy's Book," and "The Fat Boy's Downfall." But he has turned his attention to the more urgent matter of cholesterol in "The Fat Boy Goes Poly-Unsaturated."

He describes how within 180 days he reduced the cholesterol in his blood, thereby lowering his blood pressure from the danger level. He shows how he stayed on his crash diet, and he includes lists of foods that can be eaten, and those to be avoided at all costs. "The Fat Boy Goes Poly-Unsaturated" also contains a detachable pocket-size card of on and off-limit foods for handy references in restaurants and cafes.

29th Annual Meeting

AMERICAN COLLEGE OF CHEST PHYSICIANS

June 13-17, 1963, Ambassador Hotel Atlantic City

Combined Meeting with American Medical Association—Monday, June 17

Outline of Events

Thursday, June 13
Postgraduate Seminars

Friday, June 14
Open Forum
Undergraduate Medical Education
Administrative Meetings
Round Table Luncheons
Technical Exhibits

Saturday, June 15
Scientific Sessions
Round Table Luncheons
Motion Pictures
Technical Exhibitions

Sunday, June 16
Scientific Sessions
Round Table Luncheons
Motion Pictures
Technical Exhibits
Convocation
Presidents' Banquet and Dance

Monday, June 17
COMBINED MEETING WITH A.M.A.
Scientific Sessions
(Convention Hall)
Round Table Luncheons
(Hotel Claridge)
Fireside Conferences
(Ambassador Hotel)

NEUROLOGICAL-NEUROSURGICAL CENTER TO OPEN

Two dates have been assigned to the opening of the combined neurological-neurosurgical service at University Hospital of New York University Medical Center. Neurosurgical patients will be admitted starting on April 28, 1963, the day selected to move patients from the old hospital on East 20 Street to the newly-completed structure at 31 Street and First Avenue, on the campus of the Medical Center. Neurological patients will be accepted starting on June 1, 1963.

Designed to accommodate voluntary patients requiring diagnostic evaluation and/or treatment, the unit will consist of 55 beds. All private patients admitted will be under the care of the departments of neurology and neurosurgery of New York University Schools of Medicine.

Inquiries relative to admission of patients should be addressed to: Neurology-Neurosurgery Service, University Hospital, New York University Medical Center, 560 First Avenue, New York 16, N.Y.

U. S. NATIONAL HEALTH SURVEY REPORT

"Accidental injuries occurring between July 1959 and July 1961 caused a yearly average of 460 million days of reduced activity among the civilian population of the United States," Luther L. Terry, Surgeon General of the Public Health Service, said today.

This figure includes 114 million days spent in bed, 84 million work days lost by gainfully employed persons, and 12 million school days lost by children from 6 to 16 years old. The remainder includes nonwork and nonschool days for these groups, and restricted activity among housewives and other persons.

These estimates are shown in a U.S. National Health Survey report released today by the U.S. Department of Health, Education, and Welfare. The figures apply to living members of the civilian population in households throughout the United States. Time lost by people who died prior to the household interview is not included in the estimate.

Falls alone accounted for more than 37 per cent of both the restricted activity days and the days in bed, and for about 30 per cent of work-loss days. Moving motor vehicles caused about 19 per cent of the days of reduced activity, more than 22 per cent of the bed-days, and 20 per cent of the time lost from work.

INTERNATIONAL CONGRESS ON MEDICAL LIBRARIANSHIP

The Second International Congress on Medical Librarianship will be held in Washington, D.C. June 16-22, 1963. Write to Miss Ruth MacDonald at the National Library of Medicine, Bethesda 14, Maryland for complete information.

This Congress is being given under the auspices of the Medical Library Association in connection with the 62 Annual Meeting of the Association. The purpose of the Congress is to foster the development and improvement of medical library service throughout the world. Papers will be presented by librarians from a

dozen countries on the problems, needs and plans of medical libraries.

Proceedings of the Congress will be presented in the January 1964 issue of the **Bulletin of the Medical Library Association.**

THE NATIONAL REGISTRY OF DEATHS FROM MYCETISM

The National Registry of Deaths from Mycetism maintains a file of deaths attributed to wild mushrooms (1957 to date).

Physicians are requested to send notice of all such deaths (age, sex, date, locality) to Robert W. Buck, M.D., Secretary, Massachusetts Medical Society, 22 The Fenway, Boston 15.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

The next oral and clinical examinations (Part II) for all scheduled candidates are being held at the Edgewater Beach Hotel, Chicago, Illinois, by the entire Board, April 29 through May 4, 1963.

New and reopened applications, and requests for re-examination in 1964 will be accepted in the office of the Executive Secretary on or before July 1, 1963. Candidates are urged to apply as soon as possible. New applicants, re-opened candidates, and **all re-examinees** are required to submit a duplicate list of hospital dismissals for the preceding twelve months. Requests for re-opening and re-examination will not be accepted without duplicate current dismissal lists.

Current Bulletins outlining present requirements, and application forms may be obtained by writing to the Executive Secretary's office. Applicants are urged to familiarize themselves with the current rules and regulations.

LOUISIANA HEART ASSOCIATION ANNUAL MEETING—NEW ORLEANS

April 19-20, 1963

The Louisiana Heart Association will hold its annual meeting sessions on April 19-20 in New Orleans at the LSU School of Medicine Auditorium. Registration will begin on Friday at 1:30 p.m. Program Chairman for this two-day session is Dr. Jorge I. Martinez-Lopez, Assistant Professor of Medicine at LSU School of Medicine.

A Cardiac Seminar will be held on April 19 in the Grand Ballroom of the Fontainebleau Motor Hotel, with registration beginning at 10:45 a.m. Dr. Irving L. Rosen of New Orleans will act as moderator of the panel discussion. There is no registration fee.

On April 20, there will be a scientific program for nurses.

BOOK REVIEWS

A Study of Psychophysical Methods For Relief of Childbirth Pain; by C. Lee Buxton. Pp. 116. W. B. Saunders, Philadelphia and London, 1962. $4.75.

Physician, obstetrician, and educator, Doctor Buxton reports his impressions of the numerous but related technics of mental and physical training for the relief or prevention of pain in childbirth, as observed in the United States, England, Scandinavia, Switzerland, Germany, Belgium and France. The Russian and Italian methods are described, but not studied first-hand.

The author states his intention of keeping the report as "detached, objective, and dispassionate as possible". This intention is faithfully kept, but thankfully he does present his personal reactions to and interpretation of the values and possible shortcomings of the methods described. With a very favorable background in the natural childbirth methods and training technics practiced at the Yale University Clinic, Doctor Buxton devoted a sabbatical year, aided by a Commonwealth Fund Fellowship, to this study.

The compact brevity of the volume belies the wealth of material very competently condensed for the busy reader. Again, the final chapter "Conclusions" can be very profitably read by even the busiest reader to learn the author's present philosophy, gained from personal study of the various modern psycho-physical methods.

The volume is highly recommended to all students and practitioners of obstetrics, including those allied workers in the nursing, public health, and social fields.

EDWARD W. NELSON, M. D.

Mechanisms of Disease—An Introduction to Pathology; by Ruy Perez-Tamayo, M. D., W. B. Saunders Company, 1961. 512 pp. $14.00.

This is a beautiful, and now rare, example of the presentation of scientific data in a provocative and readable form. Each subject is dealt with not only in terms of our present knowledge, but in terms of the historical development of this knowledge. The reader soon realizes that the only gulfs between ourselves and men such as Beni-

vieni (ca. 1440-1502) are a few new tools and larger quantities of data. The temptation to draw premature conclusions from inadequate data are still with us, and our powers of observation and basic intellect have not increased, as we so often lead ourselves to believe. The history of pathology, which is presented in the Introduction, illustrates these points particularly well.

Specific diseases are not discussed as isolated phenomena, but in terms of their position in the spectrum of biological processes which they best illustrate. Thus, the description of lupus erythematosus is much shorter than the discussion of the concept of collagen disease. This approach is also utilized in the chapters on neoplasia, the host-parasite relationships, immune responses, etc.

The author has admirably refrained from forcing too many of his own points of view on the reader. The discussions are filled with quotations from the original observers, and brief summaries of experimental procedures are presented. The bibliography is voluminous.

The text is not limited to an overall view of diseases. Current data on the nature of fibrinoid necrosis, amyloid, hyaline bodies, degenerative changes, and other "minutia" occupy a satisfying, but not overbearing, position in the book.

This should be a stimulating book for any one who has studied disease morphologically or clinically.

WILLIAM S. WEEMS, M. D.

Atlas of Head and Neck Surgery; by John M. Lore, Jr., W. B. Saunders, 1962. 490 pp. $25.00.

This atlas covers nearly all basic surgical procedures related to the head and neck. Most of those described are clearly illustrated. Some may disagree with the author's choice of surgical procedure in correcting certain disorders. However, he has presented basic techniques which have proved to be generally satisfactory. This text should be especially useful to resident physicians undergoing training in this field of surgery.

LEWIS J. RUTLEDGE, M. D.

Early Detection and Diagnosis of Cancer; by Walter E. O'Donnell, Emerson Day, and Louis Venet, Mosby, 1962. 286 pp. $ 12.00.

Written in modified outline form and directed primarily at the detection and diagnostic management of cancer in the office patient, this book offers its greatest value to the practicing physician in the fields of general medicine and surgery. The authors emphasize the importance of early detection of cancer and its place in cancer control. No attempt is made to discuss the complete management of the cancer patient but rather to present practical techniques of detection, diagnosis, and prevention.

Unfortunately the authors have omitted from consideration lesions of the nervous system, and except for a few brief paragraphs, lesions of the esophagus, liver, and pancreas. Although admittedly rare and difficult to treat, cancer of these organs still represents a significant proportion of all malignancies seen.

The chapter on the cancer detection examination contains excellent illustrations of the equipment needed for the examination and the actual techniques of the examination. Also in this chapter practical laboratory tests applicable to office practice are outlined.

Cancer detection has its greatest benefit in those areas where physical examination and simple reliable tests combine to give the correct diagnosis early in the course of the disease. These are well covered in this book making it a worthwhile addition to the literature in the field of cancer.

HERBERT WREN, M. D.

A Textbook of Obstetrics; by Duncan E. Reid, Saunders, 1962. 1087 pp. $18.50.

Since new and revised editions of popular standard textbooks of obstetrics have been issued this year, one cannot help but ask why still another new one is published? If one compares this book with the new editions of two widely used standard texts, the answer is not readily apparent.

There are, however, excellent articles in this book on gamogenesis, placentation, placental circulation, anesthesia, and erythroblastosis. It is unfortunate that the chapter on genetics did not include more recent, important, information on chromosomal analysis and sex determination.

The format of the text is much the same as the other books in the field, though much of the material is not discussed as thoroughly as in existing texts.

Two excessively long inclusions are the detailed information on external pelvic measurements (complete with numerous photographs); and the cumbersome obstetrical record form of the Collaborative Study on Maternal-Infant Health program as a "proposed record form"!

The book is readable and well organized, but hardly fulfills an existing need in the teaching of obstetrics.

JAMES H. VENABLE, M. D.

Clinical Obstetrics; by Benjamin Tenny and Brian Little, W. B. Saunders, 1961, 440 pp. $8.50.

The title is most appropriate since the authors have condensed in easy reading form many important obstetrical problems. Basic points in prenatal care include diet, exercise, uterine abnormalities, hydramnios, post maturity and fetal death, along with complicating diseases such as diabetes, the prediabetic, hypertensive states and

renal disease. A brief chapter on blood incompatibilities including ABO and the rhesis factor with the genetics of erythroblastosis due to the latter is informative.

Clinical aspects of ovarian and uterine tumors complicating pregnancy are included. Notes on cervical disease with emphasis on the Pap smear and biopsy are timely. Hyatid mole and choricocarcinoma are discussed.

The chapter on third trimester bleeding includes recognition and management of afibrinogenemia. The problem of abortions touches upon the endocrine mechanism in pregnancy. Ruptured membranes, intrapartum infection and septic shock are discussed.

The chapters on operative obstetrics include discussion of technique, analgesia and anesthesia, and the recognition and management of face, transverse and breech presentations. Induction of labor with its indications, pros and cons for elective induction are outlined, together with the problems of prolonged labor.

Enlightening is the chapter on "Prenatal Influence and Fetal Development" especially the chromosomal aberrations present in the mongoloid.

The general practitioner as well as the specialist should find this a ready and helpful reference.

Jos. W. Reddoch, M. D.

Clinical Pathology. Application and Interpretation; by V. B. Wells, W. B. Saunders Co., Philadelphia. Edition 3. 1962. 541 p. $9.00.

According to Wells' statement in the preface, his book is directed to medical students and physicians, is intended to be used as a guide in application and interpretation of clinical laboratory studies, and contains a discussion of methodology sufficient only to give meaning to the procedures or to define their limitations.

The book is compact (541 pages) and sparsely illustrated. It covers a large, complex field, and inevitably, perhaps, one finds that occasional errors have crept into the text, and that the author has omitted things which one might wish were included. For example, in describing the laboratory determination of total bilirubin, he does not mention use of alcohol. In his discussion of conjugated bilirubin, bilirubin mono-glucuronide is not mentioned. Normal blood uric acid is given in the text as 2 to 4 mg. per 100 ml., but in the Table of Normal Values it is given as 3 to 6 mg. per 100 ml. The use of blood pH measurements is not described. In the section on coagulation, the recently recommended numerical system of nomenclature is not used, and there is no discussion of factors V and VII by any name. The normal Westergren erythrocyte sedimentation rate for males is given as 1 to 3 mm. per hour. In the discussion of cross matching, use of the Coombs cross match is not recommended or even described.

Despite these reservations, the material is well organized, readable, and reasonably well covered, so that this text should be useful as a practical guide to diagnostic clinical pathology for students and physicians wishing a quick review.

Myrton F. Beeler, M. D.

General Pathology; 3rd Edition, Edited by Sir Howard Florey, W. B. Saunders Company, Philadelphia and London, 1962, 1104 p. $22.00.

This book is a compilation of a lecture series, delivered at the University of Oxford, by outstanding English authorities. Fundamental principles underlying pathological changes are considered in the light of the most recent advances in technological methods. For example, morphologic changes in inflammation and repair are considered at molecular levels, thus giving a dynamic picture of these histologic phenomena. Serious students of pathology at all levels, undergraduate or postgraduate, will find the subject matter presented in much more detail than in the usual text book of general pathology. As the editor states, this is not a text book of general pathology but rather serves as an excellent supplement. Subjects covered are: inflammation and repair, chemotaxis, the reticuloendothelial system, inflammation of mucus membranes and the secretion of mucus, the reaction of the blood to injury, metabolic changes due to injury, fever, edema, degnerative changes, necrosis, calcification, autolysis, cell growth and malnutrition, the fundamental nature of tumor growth, the epidemiology of cancer, cancer in animals, biologic effects of radiant energy, pathogenicity and virulence of microorganisms, cell and tissue reaction to viruses, antigen, antibody reaction and their biologic effects, immunity, anaphylaxis tissue transplantation, influence of drugs on inflammatory processes and the mode of action of antibacterial substances.

The references at the end of each chapter are comprehensive and representative. The English custom of omitting this title in the bibliography is a minor inconvenience.

The subject matter in each chapter is superbly presented. These authors have succeeded in avoiding monotony by their lucid and interesting style of writing. Unfortunately this is a rare quality in most medical texts.

This book can be unqualifiedly recommended to anyone seeking modern explanations of clinical phenomena. Undergraduates will find it most helpful when studied together with the usual text book.

John Dent, M. D.

Gynecology and Obstetrics; by John W. Huffman, M. D., W. B. Saunders Company, Philadelphia, Pennsylvania, 1962. 1190 p. $28.00.

The format of this volume has been thoughtfully selected for a student of Gynecology and Obstetrics who is endeavoring, while carrying on

a busy practice, or maintaining an adequate standing in subjects in school, or endeavoring to perform his duties as an Intern or Resident to keep up with the current literature.

Huffman approaches the long sought but, as yet, never acquired chronological integration of Gynecology and Obstetrics, beginning with preconceptus embryology of the female reproductive (genitourinary) system and concluding with the provocative chapter on Geriatric Gynecology. Between these two will be found volumes of information coherently coordinated and generously sprinkled with timely and well executed illustrations. The mere integration of these two specialties is not new but the arrangement, so as to aptly discuss the function, application and complication from conceptus to senesence in accordance with growth and regression is new, different, desirable, and accomplished.

The approach to the development, physiology, growth, function, and pathologic physiology and anatomy of the female reproductive organs permits the author to discuss freely the adolescent functions, desires, physiology, and reactions. It is natural that the menstrual disorders, coital problems, and infertility problems should precede the ultimate objective of reproduction, childbirth —the obstetrical section.

The author handles such topics as coital problems, sexual phobias, perversion, aversion, frankly and forthrightly, evading controversial issues which should not be a part of such a text. This is the pattern of the entire volume and the authors clearly expressed objective of including the basic principles of etiology, clinical manifestations, diagnosis, and the selection of the medical and surgical management and its rationale, while omitting the detailed and complicated obstetrical procedures and surgical techniques.

One could take each chapter and comment favorably on each. Likewise, one could find minor differences of opinion, some in theory, others in experience, but few in fact. This reviewer feels that this is a real contribution to the library of any medical school, general practitioner, or medical student. This book should be an integral part in the teaching of students and interns and could wisely be used by gynecologists and obstetricians, who are not constantly associated with a University to refresh and reorganize his thinking when a generous amount of current literature of selected journals are added. This reviewer agrees with the author and others that the textbook is not the place to learn surgical or obstetrical procedure and techniques.

O. R. Depp, M. D.

Specific and Non-Specific Factors in Psychopharmacology; Edited by Max Rinkel, M. D., Philosophical Library, Inc., New York, 1963; 174 p.; $3.75.

The papers in this volume were presented at a symposium held at the Third World Congress of Psychiatry, in Montreal, Canada, June 4-10, 1961. These essays represent prolonged, intensive studies by some of the outstanding investigators in the relatively new field of neuropsychopharmacology.

The controversial biochemical aspects are presented objectively. Hoagland criticizes the lack of normal controls in a study that showed an increase of indole excretion which preceded the exaggeration of psychotic symptoms. He cites the remarkably good correlation between aldosterone excretion and the emotional state of the person, whatever his psychiatric classification may be.

In another paper the shortcomings of double-blind studies, utilizing the placebo, prototype, and new active drug groups, are discussed. The necessity for further improvement in drug evaluations is stressed along with the need to remove "expectancy bias."

Another group of papers deals with the correlation between subjective response of the drugs and the personality state of the subject. Here, the variation in drug response and biochemical individuality (distinctive combination of saliva, urine, blood, etc.) is also stressed.

It may be noted that the nihilistic attitude towards quantitative psychological measurements is not considered here, since any approach which negates the possibility of progress is not worthy of mention. Although tremendous problems exist in the quantitative biochemical and psychological aspects of neuropsychopharmacology, it is nonetheless most encouraging that men of outstanding ability and experience are devoting their time to this area.

Donald M. Gallant, M. D.

Textbook of Endocrinology, by Robert H. Williams, M. D. (Ed.), W. B. Saunders & Co., 3rd ed., 1962, 1204 p. $21.00.

An old friend in a new jacket has been returned to the clinician's desk with the publication of a third edition of William's Textbook of Endocrinology. Edited by Professor Williams, the volume was written by twenty-one of the foremost clinical endocrinologists contributing to medical literature today. Offered is concise, well indexed material which should serve to answer most problems arising from suspected dysfuction of the glands of internal secretion. Though some sections were lacking in basic science data, this is in my opinion, from a clinical outlook, the preferable of endocrine tests available today.

Particularly notable, is the section concerning the thyroid written by Professor Williams. The adrenal section, clinically complete and quite adequate in its discussion of interpretation of laboratory tests, seems somewhat sketchy when dealing with basic physiology.

Doctors Rasmussen and Roifenstein's discussion of parathyroid function often becomes somewhat too detailed for the average clinician and in my

opinion, an unfortunate omission was a failure to discuss the admittedly far from perfect phosphorus clearance test, references to which still do appear in the current literature.

Other sections concerning the gonads, pancreas, and pituitary, all appear concise and accurate.

The small section dealing with hormones and cancer seems quite superficial and in my opinion, should comprise a separate detailed volume.

Despite the inadequacies which must inevitably occur in a text of broad scope, Dr. Williams and his contributors should be congratulated on publishing a book invaluable to those dealing with glandular disease on a clinical level.

WILEY H. JENKINS, M. D.

Handbook of Pharmacology — the Actions and Uses of Drugs; by Windsor C. Cutting, Appleton-Century-Crofts, 1962, 643 p. $5.95.

In the preface to this handbook it is stated that "the primary effort has been to review . . . briefly . . ." and "add what seems to be new and pertinent". While there is little doubt that the author has gone to pains to accomplish these objectives, it appears to this reviewer that the paragraph headed "Natural thiaminases" (p. 390) is not entirely pertinent or, for that matter, useful. It reads "In fish fed to foxes, giving deficiency; in bracken eaten by horses, giving staggers; curable by thiamin."

The author's admittedly laudable passion for brevity might have on occasions been put to better use than is the case. Thus (pp. 14-17) sulfamylon gets three lines, capped by the word "obsolete", while the methylated sulfadiazines get two and a half.

This reviewer does not care for the use of arrows between structually similar drugs (e.g. p. 69) to indicate historical development, since these might easily be taken to imply chemical convertibility.

We do not think that (p. 95) "AET may alternately act by the 'mixed disulfide hypothesis' . . . ", if only on grammatical grounds.

Nor do we either care for or believe in the following lines, which purport to summarize the uses of caffeine (p. 579):

"(a) to induce wakefulness, but more often as beverage coffee than medicinal

(b) contained in over the counter tablets for keeping awake

(c) often injected as a harmless, final administration to the dying"

The book has an extensive collection of chemical formulae and an efficient index, which also lists the one (usually) trade name the author generally gives with the official name.

In summary the book, while undoubtedly useful for reference, seems to us to be too ambitious and thus to pay the penalty of oversimplification, occasional obscureness and unselectiveness.

S. KRUGER, Ph.D.

Handbook of Psychiatric Treatment in Medical Practice; by Nathan S. Kline and Heinz Lehmann, W. B. Saunders Company, Philadelphia, 1962. 124 p. $3.50.

This handbook is apparently aimed at students who are preparing for a non-psychiatric medical practice. It is brief, clear and practical to the point of being dogmatic. Theory is not attempted and the orientation is completely clinical.

One might question the over-simplification of some of the statements, for example, "The treatment of chronic tension and anxiety states usually does not present any major problem." Also the brevity would seem, at times, to be limiting the value of the book. For example, under the heading, "How To Diagnose a Neurosis" no advice is given except to state, "Neuroses without exception are exaggerations of characteristics which all of us have had."

It would seem that the publishers could have well produced this as a pamphlet since most of the pages contain only a brief paragraph.

WELLS BUDDINGTON, M. D.

W. B. SAUNDERS COMPANY features the following new editions in their full page advertisement appearing elsewhere in this issue:

REED—COUNSELING IN MEDICAL GENETICS

An up-to-date book telling you exactly what you want to know about the chances of a hereditary disability being passed from parent to child.

NADAS—PEDIATRIC CARDIOLOGY

A practical text covering the entire field of heart disease in children.

HINSHAW and GARLAND—DISEASES OF THE CHEST

A useful book unsurpassed for vividness of illustration and completeness of coverage.

PUBLICATIONS RECEIVED

(Certain ones of these will be selected for Review)

Doubleday & Co., Inc., N. Y.: Moving into Manhood, by W. W. Bauer, M. D., Foreword by Morris Fishbein, M. D.; The Fat Boy Goes Poly-Unsaturated, by Elmer Wheeler.

The C. V. Mosby Co., St. Louis: Synopsis of Pediatrics, by James G. Hughes, M. D. with the collaboration of twenty faculty members of the University of Tennessee College of Medicine.

W. B. Saunders Co., Phila.: Current Therapy, 1963, edited by Howard F. Conn, M. D.; Physiology of the Circulation in Human Limbs in Health and Disease, by John T. Shepherd, M. D.

Charles C Thomas, Publisher, Springfield, Ill.: Answering Parents' Questions, by William G. Crook, M. D.; Bronchial Asthma: Its Diagnosis and Treatment, by Albert H. Rowe, M. D. and Albert Rowe, Jr., M. D.



lowers motility | relieves cramping | stops diarrhea

LOMOTIL® Antidiarrheal tablets and liquid

(brand of diphenoxylate hydrochloride with atropine sulfate)

Traditionally the most effective means of slowing excess intestinal motility in diarrhea and so of relieving the disorder have been the opium derivatives. Now Lomotil makes available an antidiarrheal agent[1] of greater therapeutic efficiency than morphine.

By controlling hypermotility, the basic mechanical dysfunction of diarrhea, Lomotil reduces the frequency and fluidity of stools, diminishes cramping and controls diarrhea in many patients in whom other drugs have proved inadequate.

In a recent clinical report Cayer and Sohmer[2] state: "The alleviation of symptoms [with Lomotil] was usually prompt, occurring within 24 to 72 hours even in the long-standing chronic cases. . . . A surprisingly satisfactory response was obtained in 75 per cent of the patients with regional enteritis and in 63 per cent of those with ulcerative colitis, all of whom had failed to respond to other measures."

The high therapeutic efficiency of Lomotil, its safety, convenience and economy may be used to advantage in acute or chronic diarrhea.

Dosage: For *adults* the recommended initial dosage is two tablets (2.5 mg. each) three or four times daily. Maintenance dosage may be as low as two tablets daily.

Lomotil is supplied as unscored, uncoated white tablets of 2.5 mg. and as liquid containing 2.5 mg. in each 5 cc. A subtherapeutic amount of atropine sulfate (0.025 mg.) is added to each tablet and each 5 cc. of the liquid to discourage deliberate overdosage. Recommended dosage schedules should not be exceeded.

Note: Lomotil is an exempt preparation under Federal narcotic statutes.

Detailed information and directions for use in children and adults are available in Physicians' Product Brochure No. 81. G. D. Searle & Co., P. O. Box 5110, Chicago 80, Illinois.

1. Janssen, P. A. J., and Jageneau, A. H.: A New Series of Potent Analgesics: Dextro 2:2-Diphenyl-3-Methyl-4-Morpholino-Butyrylpyrrolidine and Related Amides. 1. Chemical Structure and Pharmacological Activity, J. Pharm. Pharmacol. 9:381-400 (June) 1957.
2. Cayer, D., and Sohmer, M. F.: Long-Term Clinical Studies with a New Constipating Drug, Diphenoxylate Hydrochloride, N. Carolina Med. J. 22:600-604 (Dec.) 1961.

G. D. SEARLE & CO. *Research in the Service of Medicine*

neither **stasis** nor **spasm,**
nor **tension**
stays this patient
from his
appointed rounds



DECHOLIN-BB®

. especially when
UPPER G.I. COMPLAINTS
have biliary implications

Each Tablet Contains:

for biliary/intestinal **stasis** → DEHYDROCHOLIC ACID 250 mg. (3¾ gr.).

for smooth-muscle **spasm** → BELLADONNA EXTRACT 10 mg. (⅙ gr.).

for nervous **tension** → BUTABARBITAL SODIUM 15 mg (¼ gr.).

Average adult dose: 1 or, if necessary, 2 tablets three times daily. **Precautions:** Observe patients periodically for increased intraocular pressure and barbiturate habituation or addiction; caution drivers against possible drowsiness. **Side effects:** Dehydrocholic acid may cause transitory diarrhea; belladonna may cause blurred vision and dry mouth. **Contraindications:** Biliary tract obstruction, acute hepatitis, glaucoma, prostatic hypertrophy. **Available:** DECHOLIN-BB, bottles of 100 tablets. **Also:** DECHOLIN® with Belladonna (dehydrocholic acid, 250 mg.; belladonna extract, 10 mg.) and DECHOLIN® (dehydrocholic acid, 250 mg.), bottles of 100 and 500 tablets.

AMES COMPANY INC.

34963

throughout the wide middle range of pain — control with one analgesic* PERCODAN® *tablets

(Salts of Dihydrohydroxycodeinone and Homatropine, plus APC)

In a comprehensive range of indications marked by moderate to moderately severe pain, PERCODAN *assures speed, duration, and depth of analgesia by the oral route... acts within 5 to 15 minutes... usually provides uninterrupted relief for 6 hours or longer with just 1 tablet... rarely causes constipation.*



Formula—Each scored yellow PERCODAN* Tablet contains 4.50 mg. dihydrohydroxycodeinone HCl (Warning: May be habit-forming), 0.38 dihydrohydroxycodeinone terephthalate (Warning: May be habit-forming), 0.38 mg. homatropine terephthalate, 224 mg. acetylsalicylic acid, 160 mg. acetophenetidin, and 32 mg. caffeine. **Also available:** PERCODAN®-DEMI, containing the complete PERCODAN formula but with only half the amount of salts of dihydrohydroxycodeinone and homatropine. Both products are on oral Rx in all states where laws permit. **Average Adult Dose**—1 tablet every 6 hours. **Side Effects and Contraindications**—Although generally well tolerated, PERCODAN may cause nausea, emesis, or constipation in some patients. PERCODAN should be used with caution in patients with known idiosyncrasies to acetylsalicylic acid or acetophenetidin and in those with blood dyscrasias. *Literature on request.* **ENDO LABORATORIES Richmond Hill 18, New York**

Endo®

*U.S. Pats. 2,628,185 and 2,907,768



If you don't have fluoride in your water...



...you should know about new Vi-Daylin® w/Fluoride with entrapped flavor

The evidence is in. More than 8,000 published reports verify the effectiveness and safety of fluoride as prophylaxis against dental caries. Yet most communities today are still without water fluoridation.

If you are in such an area, new Vi-Daylin w/Fluoride is an almost ideal means of supplementation for children. For three reasons:

1. Each tablet contains the equivalent of 1 mg. fluoride. This is the amount suggested for children three and over by the American Dental Association.*[1,2]

2. As in regular Vi-Daylin Chewable, your patient gets the benefit of *entrapped flavor*. This ingenious, double-coating process permits complete entrapment of raw vitamin tastes and odors—and keeps delicate flavoring oils fresh until the moment of use. Result: A tablet that tastes like citrus candy.

3. Sweetened with sugar-free Sucaryl®. Because Sucaryl is non-nutritive, it will not react with bacteria to form acids in the mouth.

Cost? No more than regular Vi-Daylin Chewable in economical bottles of 100.

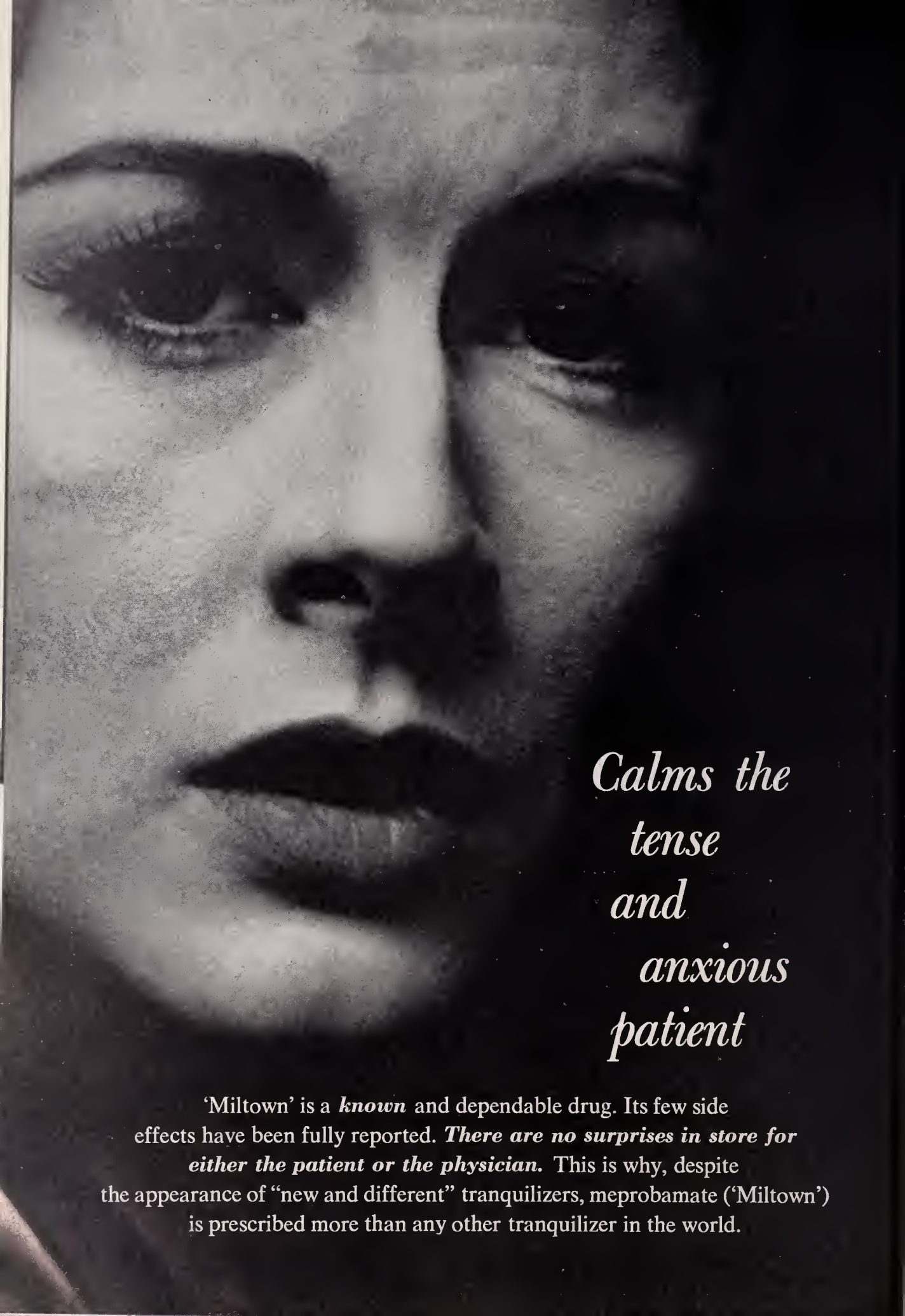
75TH ANNIVERSARY ABBOTT

1. Prescribing Supplements of Dietary Fluorides, Council of Dental Therapeutics, J.A.D.A., 56:591, April, 1958.
2. Fluoride Compounds, Accepted Dental Remedies, 27th Ed.:139, 1962.

VI-DAYLIN w/FLUORIDE—Multivitamins with Fluoride. SUCARYL—Abbott's Non-Caloric Sweetener.

*In areas where drinking water is substantially devoid of fluoride.

304213



'Miltown' is a ***known*** and dependable drug. Its few side effects have been fully reported. ***There are no surprises in store for either the patient or the physician.*** This is why, despite the appearance of "new and different" tranquilizers, meprobamate ('Miltown') is prescribed more than any other tranquilizer in the world.

Clinically Proven

in more than 750 published clinical studies
and over seven years of clinical use

Outstanding Record of Effectiveness and Safety

1. Relieves anxiety and anxious depression in a broad spectrum of clinical conditions. Doesn't leave patients "too groggy" to work or think or learn.

2. Relaxes both mind and skeletal muscle. Relieves physical tension as well as emotional stress.

3. Toxicity is low and side effects are few. Does not cause liver damage or Parkinson-like effects.

USUAL DOSAGE: One or two 400 mg. tablets t.i.d.
SUPPLIED: 400 mg. scored tablets, 200 mg. sugar-coated tablets; bottles of 50. Also as **Meprotabs®** — 400 mg. *unmarked,* coated tablets; and in *sustained-release* capsules as **Meprospan®-400** and **Meprospan®-200** (containing respectively 400 mg. and 200 mg. meprobamate).

Miltown®

meprobamate (Wallace)

WALLACE LABORATORIES / *Cranbury, N. J.*

CM-6554



GLYNAPHYLLIN

A bronchial relaxant preparation designed for the treatment and prophylactic management of bronchial asthma, asthmatic bronchitis and other bronchial diseases including chronic pulmonary emphysema in which spasm of the bronchial smooth muscle may play a role.

COMPOSITION:
Each Tablet contains:

Aminophyllin	3 grains
Phenobarbital	$\frac{1}{4}$ grain
Ephedrine Sulfate	$\frac{3}{8}$ grain

ADMINISTRATION AND DOSAGE:
For the prophylactic management of the asthmatic, 1 tablet every 6 or 8 hours may suffice, although the physician may employ larger doses for this purpose. In acute attacks of bronchial asthma, GLYNAPHYLLIN may be considered an adjunct to other forms of treatment and dosage must be adjusted to the individual patient.

CONTRAINDICATIONS:
GLYNAPHYLLIN should not be administered to patients who suffer from associated gastro-intestinal disease which may be aggravated by nausea and vomiting. The preparation is contraindicated also in hypertension and other cardiovascular diseases in which ephedrine is undesirable. Because of its phenobarbital content, GLYNAPHYLLIN can be habit forming and is contraindicated in patients in whom drowsiness is a significant disadvantage.

HOW SUPPLIED:
In bottles of 100, 500 and 1,000 tablets.

GLYNAPHYLLIN
is another "Established Need" product

(FTP) **First Texas** *Pharmaceuticals, Inc.*
DALLAS • SINCE 1901 • ATLANTA



in arthritis: vitamins are therapy

In dealing with the chronic stress of arthritis the physician often faces the problem of nutritional imbalance. High potency B and C supplementation is needed for rapid replenishment of tissue stores of these water-soluble vitamins. STRESSCAPS meet this need and help support the natural metabolic defenses in the disease. Supplied in decorative "reminder" jars of 30 and 100.

Each capsule contains:	
Vitamin B_1 (Thiamine Mononitrate)	10 mg.
Vitamin B_2 (Riboflavin)	10 mg.
Niacinamide	100 mg.
Vitamin C (Ascorbic Acid)	300 mg.
Vitamin B_6 (Pyridoxine HCl)	2 mg.
Vitamin B_{12} Crystalline	4 mcgm.
Calcium Pantothenate	20 mg.

Recommended intake: Adults, 1 capsule daily, or as directed by physician, for the treatment of vitamin deficiencies.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N.Y.

STRESSCAPS®

Stress Formula Vitamins Lederle



HOW TO BE SURE
your young patients get the aspirin dosage you want them to have

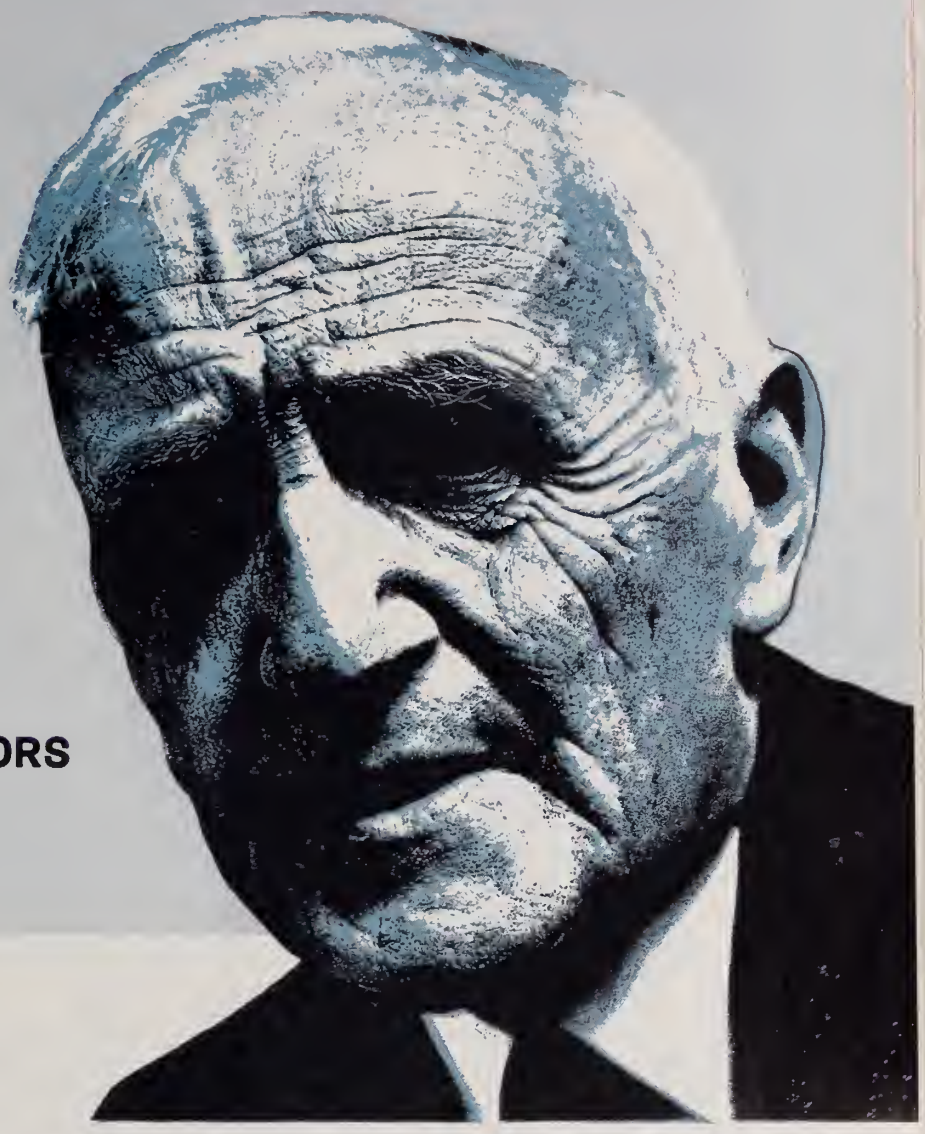
The answer is Orange Flavored Bayer Aspirin for Children

The dosage is 1¼ grains per tablet. Mothers place such confidence in the Bayer name. And the new orange flavor is so fresh and smooth that children take it readily. (The grip-tight cap on the bottle helps keep them from taking it on their own.)

For professional samples, just write The Bayer Company, De pt. 112, 1450 Broadway, New York 18, New York.



For your elderly arthritic patients



AN EFFECTIVE GERIATRIC ANTIARTHRITIC WITH ESSENTIAL SAFETY FACTORS

safely indicated – even in the presence of **HYPERGLYCEMIA**

PABALATE-SF may be prescribed with confidence to elderly arthritics—even in the presence of hyperglycemia—because of its widely recognized **Safety Factors:** (1) its potassium salts cannot contribute to sodium retention; (2) its enteric coating assures gastric tolerance; and (3) its use is free from the serious reactions in diabetic patients sometimes noted during therapy with steroids or pyrazolone derivatives. As for effectiveness, it has been found "superior to aspirin in the treatment of chronic rheumatic disorders."[1]

Each persian-rose enteric-coated tablet contains: potassium salicylate, 0.3 Gm.; potassium para-aminobenzoate, 0.3 Gm.; ascorbic acid, 50 mg.

1. Ford, R. A., and Blanchard, K. P.: J.-Lancet 78:185, 1958.

Precaution: Occasionally, mild salicylism may occur, but this responds readily to dosage adjustment. In the presence of severe renal impairment, care should be taken to avoid accumulation of salicylate and PABA. Supply: Bottles of 100 and 500 enteric-coated tablets.

Pabalate®-SF

Robins

(the new, convenient way to prescribe Pabalate-Sodium Free)

A. H. ROBINS COMPANY, INC., RICHMOND, VIRGINIA

Trocinate®

Brand of Thiphenamil HCl.

FOR DIVERTICULITIS, MUCUS COLITIS,

IRRITATIVE DIARRHEA, IRRITATIVE URETERITIS,

BLADDER SPASM

*T*rocinate is a musculotropic antispasmodic with no appreciable anticholinergic action. It relieves spasms of the lower bowel and genito-urinary tract by direct action on the contractile mechanism of smooth muscles. The absence of any appreciable action on the autonomic nervous system eliminates the usual side-effects. It may be safely used in glaucoma. Each tablet contains 100 mgs. Trocinate HCl.

USUAL DOSAGE: 2 tablets, 4 times a day. Maintenance dosage is frequently lower.

Dispensed in bottles of 40 and 250 tablets.

WM. P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA

Manufacturers of ethical pharmaceuticals since 1856

In intestinal "grippe"

prompt 4 way check of diarrhea

- Curbs excessive peristalsis
- Adsorbs toxins and gases
- Soothes inflamed mucosa
- Provides intestinal antisepsis



POMALIN

TRADEMARK

Liquid

EFFECTIVE ANTIDIARRHEAL

FORMULA: *Each 15 cc. (tablespoon) contains:*
Sulfaguanidine U.S.P. 2 Gm.
Pectin N.F. 225 mg.
Kaolin 3 Gm.
Opium tincture U.S.P. ...0.08 cc.
(equivalent to 2 cc. paregoric)

DOSAGE: Adults: Initially 1 or 2 tablespoons from four to six times daily, or 1 or 2 teaspoons after each loose bowel movement; reduce dosage as diarrhea subsides.

Children: ½ teaspoon (=2.5 cc.) per 15 lb. of body weight every four hours day and night until stools are reduced to five daily, then every eight hours for three days.

SUPPLIED: *Bottles of 16 fl. oz. (raspberry flavor, pink color)*
Exempt Narcotic. Available on Prescription Only.

Winthrop LABORATORIES
New York 18, N. Y.

Before prescribing be sure to consult Winthrop's literature for additional information about dosage, possible side effects and contraindications.



Browne-McHardy Clinics

MAIN CLINIC
3636 St. Charles Ave.
New Orleans 15, La.
TWinbrook 9-2376

GRAVIER ST. DIVISION
630 Gravier St.
New Orleans 12, La.
524-1605

VETERANS HIGHWAY DIVISION
8601 Veterans Memorial Hwy.
Metairie, La.
VErnon 3-7341

INTERNAL MEDICINE
Cardiology
Endocrinology
Gastroenterology
Hematology
Rheumatology

Donovan C. Browne, M. D.
Wiley H. Jenkins, M. D.
Robert C. Judice, M. D.
John T. Leckert, M. D.
G. Gordon McHardy, M. D.
Robert J. McHardy, M. D.
Swan S. Ward, M. D.
George E. Welch, M. D.
Guy T. Williams, M. D.

DERMATOLOGY
William Burroughs, M. D.

DISEASES OF THE CHEST
Joseph E. Blum, Jr., M. D.

EAR, NOSE and THROAT
Norma Kearby, M. D.

GENERAL SURGERY
Claude C. Craighead, M. D.
Raul G. Reyes, M. D.

OBSTETRICS and GYNECOLOGY
C. Gordon Johnson, M. D.
Robert I. Ayerst, M. D.
James M. Todd, Jr., M. D.

OPHTHALMOLOGY
Oliver H. Dabezies, M. D.

INDUSTRIAL MEDICINE
Ralph J. McDonough, M. D.
Albert W. Auld, M. D.

PEDIATRICS
Carl E. Kemmerly, M. D.
Milton H. Donaldson, M. D.

RADIOLOGY and RADIOTHERAPY
Charles O'Dowd Lilly, M. D.
Joseph B. Marino, M. D.
Walter McDowell, M. D.

UROLOGY
John F. Lally, M. D.

AUXILIARY SERVICES
Cytology
Diabetics
Electroencephalograph
Endoscopy
Medical Laboratory
Pharmacy
Physical Therapy
Pulmonary Function Studies

from *Curity*

A big aseptic advance in a tiny new package!

The New WEBCOL Alcohol Preps

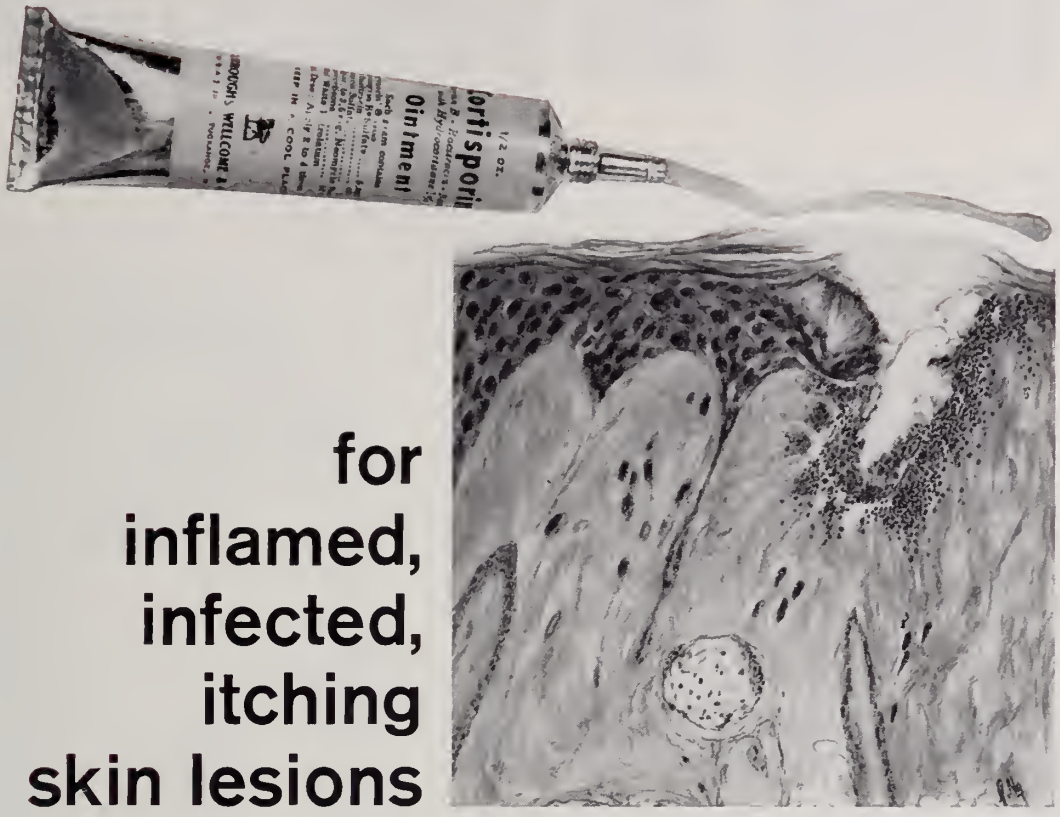
Sterile — ethylene oxide kills alcohol resistant spores.

Convenient — ready for instant use.

Economical — no waste from evaporation, no dripping from excess saturation.

PEACOCK
SURGICAL COMPANY INC.
1235 TEXAS AVENUE
SHREVEPORT, LOUISIANA





for inflamed, infected, itching skin lesions

'CORTISPORIN'® OINTMENT

brand

anti-inflammatory / bactericidal / antipruritic

- relieves pain and itching
- reduces inflammation and edema
- provides bactericidal action against most gram-positive and gram-negative organisms, including **Pseudomonas aeruginosa**
- rarely sensitizes

General Indications: Wherever inflammation or infection occurs and is accessible for topical therapy, as in burns, wounds, skin grafts; and plastic, proctologic, gynecologic, or general surgical procedures.

Dermatologic Indications: Atopic, contact, stasis, infectious eczematoid, and lichenoid dermatitis; neurodermatitis, eczema, pyoderma; anogenital pruritus; primary dermatoses with or without secondary infection; external otitis.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms.

Available: In tubes of ½ oz. with applicator tip and ⅛ oz. with ophthalmic tip. Although the ⅛ oz. tube is intended for ophthalmic use, it may be used topically.

Each gram contains:

'Aerosporin'® brand Polymyxin B* Sulfate	5,000 Units
Zinc Bacitracin	400 Units
Neomycin Sulfate (equivalent to 3.5 mg. Neomycin Base)	5 mg.
Hydrocortisone	10 mg. (1%)
Special White Petrolatum	q.s.

*U.S. PAT. NOS. 2,565,057 AND 2,695,261

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N. Y.

Lifts depression..



"I feel like my old self again!" Thanks to your balanced Deprol therapy, her depression has lifted and her mood has brightened up – while her anxiety and tension have been calmed down. She sleeps better, eats better, and normal drive and interest have replaced her emotional fatigue.

as it calms anxiety

Brightens mood...relaxes tension

While energizers may stimulate the patient when she is depressed—*they often aggravate her anxiety, tension and insomnia.*

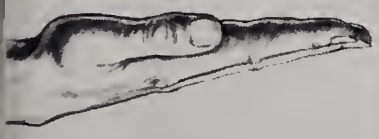
And although tranquilizers may help the patient when she is tense and anxious—*they often deepen her depression and emotional fatigue.*

These "seesaw" effects are avoided with Deprol. It lifts depression as it calms anxiety—a balanced action that brightens the mood, relaxes tension, and relieves insomnia, anorexia and emotional fatigue.

Exceptionally well tolerated. In four years of clinical use no liver toxicity, hypotension, psychotic reactions or changes in sexual function have been reported with Deprol.

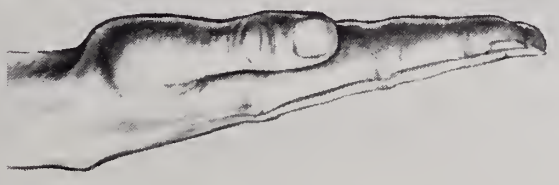
Compatible with therapy for physical diseases. Deprol does not complicate specific therapies for cardiovascular, G.I. and upper respiratory conditions.

Energizers relieve depression





Deprol both lifts depression and calms anxiety





Tranquilizers reduce anxiety

Dosage: Usual starting dose is 1 tablet q.i.d. When necessary, this may be increased gradually up to 3 tablets q.i.d. With establishment of relief, the dose may be reduced gradually to maintenance levels.

Composition: 1 mg. 2-diethylaminoethyl benzilate hydrochloride (benactyzine HCl) and 400 mg. meprobamate.

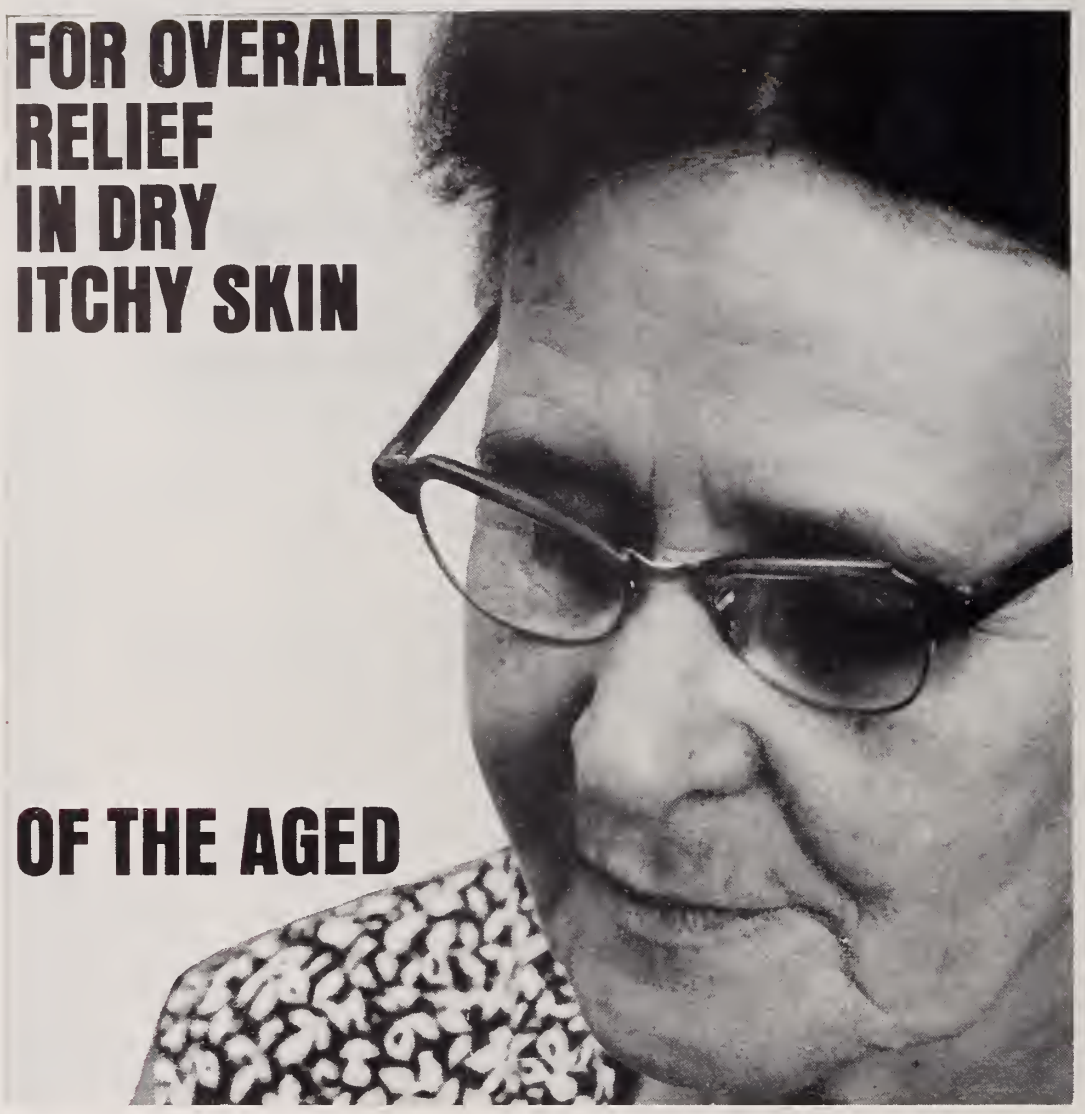
Supplied: Bottles of 50 light-pink, scored tablets. Write for literature and samples.

▲Deprol▲®

WALLACE LABORATORIES / *Cranbury, N. J.*

CD-7398

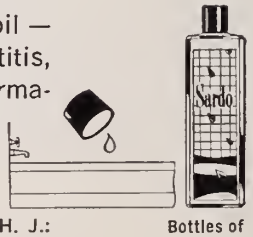
FOR OVERALL RELIEF IN DRY ITCHY SKIN OF THE AGED



SARDO® IN THE BATH

Borota and Grinell[1] found that SARDO baths rehydrate, relieve dryness, and promptly allay itching over the entire skin in elderly patients. A very fine lubricating film prevents undue evaporation of moisture—to help restore the normal lipid/aqueous balance of the skin, and keep it softer, smoother, more comfortable.

SARDO is the original high quality, superbly dispersible* bath oil—clinically proven[1-6] to allay xerosis and pruritus in atopic dermatitis, diabetic dry skin, eczematoid dermatitis, soap dermatitis, neurodermatitis, etc. Non-sensitizing, pleasant, non-sticky, economical.



Bottles of 4, 8 and 16 oz.

SAMPLES and literature
available from... SARDEAU, INC. 75 East 55th St., New York 22, N. Y.

1. Borota, A., and Grinell, R. N.: J. Amer. Geriatrics Soc., 10:413, 1962. 2. Spoor, H. J.: N. Y. State J. M., 58: 3292, 1958. 3. Lubowe, I. I.: Western Med., 1:45, 1960. 4. Weissberg, G.: Clin. Med., 7:1161, 1960. 5. Lieberman, W.: Amer. J. Proctology, 12:374, 1961. 6. Dick, L. A.: Skin, 1:341, 1962.

*Pat. Pend. T.M. © 1963 by Sardeau, Inc.

FOR YOUR Patients' HEALTH...
COME TO



AMERICAN MEDICAL ASSOCIATION
112TH ANNUAL MEETING
JUNE 16 - 20

Along Atlantic City's famed seaside boardwalk, take the big step toward a complete medical "refresher."

The world's foremost investigative talent—latest advances in general practice—newest tools and techniques—hundreds of topflight exhibits—all in one compact, comprehensive five-day session—**to help you bring to your patients the best that medicine has to offer.**

It's all in Atlantic City—and it's all for YOU!

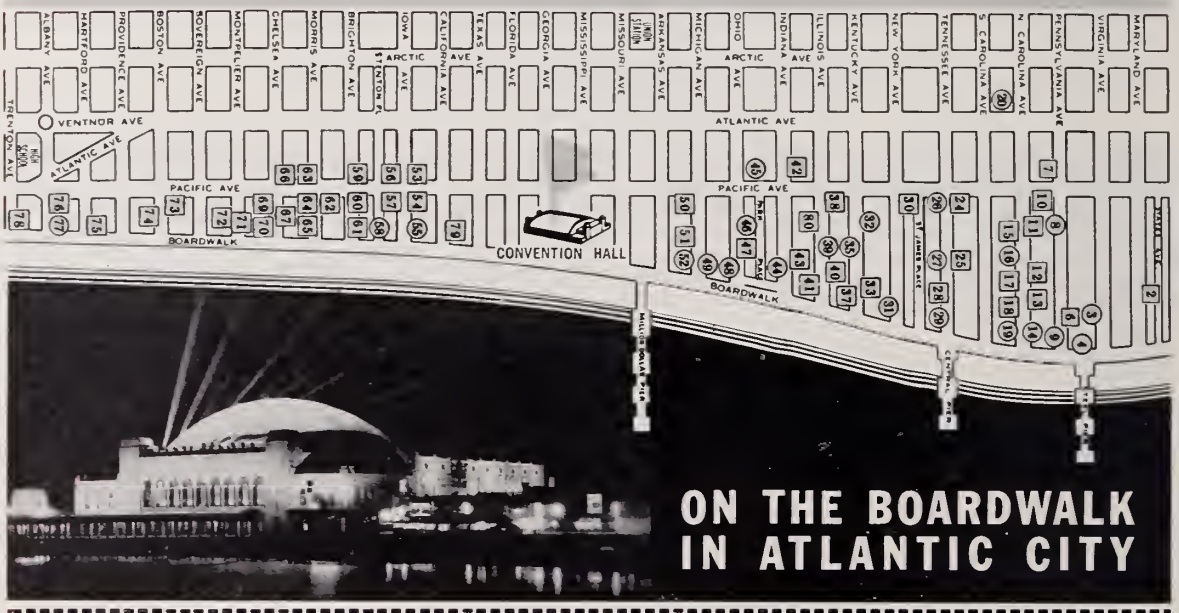
See JAMA May 4 for complete scientific program, hotel accommodations and advance registration forms

AMERICAN MEDICAL ASSOCIATION / 535 N. DEARBORN ST. / CHICAGO 10, ILL.

AMA 112TH ANNUAL MEETING

JUNE 16-20

Atlantic City's fine resort accommodations has superb recreational facilities and all hotels and motels are convenient to the newly remodeled Convention Hall on the ocean front. Plan now to attend and save time by sending in these coupons for room reservations and advance registration for the AMA Annual Meeting.



ON THE BOARDWALK IN ATLANTIC CITY

PLEASE FILL IN COUPON BELOW and RETURN DIRECTLY TO

AMA Housing Bureau c/o Atlantic City Convention Bureau
16 Central Pier, Atlantic City, New Jersey

CUT HERE

FOR ROOM RESERVATIONS

Please print or type six choices of Hotels or Motels:

1st_____ 2nd_____

3rd_____ 4th_____

5th_____ 6th_____

Please enter my reservation at the above hotel for ☐ single ☐ double ☐ twin ☐ suite at $_____

Date Arriving_____ hour_____ a.m._____ p.m._____ Leaving_____

Room will be occupied by:

NAME STREET ADDRESS CITY ZONE STATE

Additional Occupants:_____

Please attach list of additional names if you do not have sufficient space here. Also list ages of children, if any.

If you are an industrial exhibitor, be sure to give name of firm and individuals to occupy room or rooms reserved. Please make all changes and cancellations through the Housing Bureau. Hotel reservations will be held only until 6:00 p.m. unless otherwise specified.

ATLANTIC CITY HOTEL-MOTEL ACCOMMODATIONS

HOTELS ○ MOTELS □

MAP NO.	BOARDWALK HOTELS	SINGLES	DOUBLES	TWINS
9	ABBEY	8.00-12.00	12.00	14.00-16.00
58	AMBASSADDR*	8.00-20.00	_____	10.00-22.00
14	CHALFDNTE-HADDDN HALL* (Woman's Auxiliary Headquarters)	8.00-12.00	_____	11.00-30.00
44	CLARIDGE	10.00-21.00	_____	14.00-25.00
61	DEAUVILLE	14.00-18.00	_____	16.00-24.00
49	DENNIS*	9.00-14.00	_____	12.00-24.00
48	MARLBDRDUGH-BLENHEIM	(DCEAN WING DNLY)		22.00
29	MAYFLDWER*	10.00-12.00	12.00	12.00-18.00
77	PRESIDENT	8.00-15.00	_____	11.00-18.00
55	RITZ-CARLTDN*	8.00-20.00	_____	10.00-20.00
4	SEASIDE*	12.00	_____	14.00-22.00
52	SHELBURNE*	10.00-14.00	_____	12.00-24.00

MAP NO.	OFF-BOARDWALK HOTELS	SINGLES	DOUBLES	TWINS
41	TRAYMORE (HEADQUARTERS)	(ND ROOMS AVAILABLE)		
16	CARDLINA CREST	7.00-8.00	9.00	10.00-12.00
8	CDLTON MANDR*	9.00-15.00	_____	14.00-20.00
26	CDLUMBUS*	_____	10.00	10.00
45	EASTBDURNE*	7.00-9.00	10.00	11.00
27	FLANDERS*	6.00-7.00	8.00-9.00	10.00-14.00
35	JEFFERSDN*	7.00-8.00	10.00	10.00-12.00
31	LEXINGTDN*	7.00-8.00	8.00-11.00	9.00-11.00
39	MADISDN*	6.00-8.00	8.00-10.00	8.00-16.00
3	MDRTDN*	8.00-10.00	11.00-12.00	12.00-15.00
20	PENN-ATLANTIC*	7.00	10.00-12.00	10.00-12.00
32	RICHFIELD-BDSCDBEL*	4.00-6.00	6.00-8.00	6.00-8.00
46	RUNNYMEDE*	7.00-10.00	10.00-12.00	8.00-12.00

▼ MOTEL-TYPE ACCOMMODATIONS ▼

MAP NO.		SINGLES	DOUBLES	TWINS
33	ACAPULCD*	12.00	14.00	16.00
62	ALGIERS	14.00	_____	18.00-20.00
71	ALDHA	_____	_____	14.00-22.00
54	ASCDT*	12.00-14.00	_____	14.00-20.00
80	BALA	16.00	_____	18.00-22.00
12	BARCLAY	_____	_____	20.00-28.00
63	BARDNET	_____	16.00	14.00-16.00
17	BURGUNDY	12.00-14.00	_____	14.00-20.00
79	CALIFDRNIAN	12.00-14.00	_____	14.00-20.00
69	CARIBE	10.00-12.00	12.00	14.00-18.00
15	CARDLINA CREST	_____	12.00	14.00-16.00
64	CASTLE RDC	14.00	_____	16.00-20.00
18	CATALINA	16.00	_____	18.00-24.00
43	CDLDNY (HEADQUARTERS)	(ND RDDMS AVAILABLE)		
40	CDNTINENTAL	12.00	_____	14.00-18.00
13	CDRDNET	12.00-14.00	_____	14.00-20.00
10	CRDWN*	14.00	16.00	18.00
60	DEAUVILLE	16.00-20.00	_____	18.00-26.00
57	DIPLDMAT	10.00-12.00	_____	14.00-20.00
59	DUNES	14.00	_____	16.00-20.00
42	EASTBOURNE	_____	_____	16.00-20.00
53	ELDDRADD	_____	_____	14.00-18.00
51	EMPRESS	10.00-12.00	_____	12.00-24.00

MAP NO.		SINGLES	DOUBLES	TWINS
30	ENVDY	14.00-16.00	16.00-22.00	_____
24	FIESTA	14.00-16.00	_____	16.00-22.00
56	GALAXIE	_____	18.00	20.00
70	LA CDNCHA	12.00	16.00	18.00-24.00
11	LAFAYETTE MDTDR INN*	8.00-20.00	10.00-16.00	12.00-24.00
78	LINCDLN-RDDSEVELT*	12.00-15.00	_____	13.00-17.00
37	LDMBARDY	10.00-12.00	_____	12.00-24.00
72	MALIBU	9.00-12.00	_____	14.00-20.00
65	MARDI GRAS	_____	_____	12.00-22.00
66	MARTINIQUE	_____	_____	16.00-18.00
28	MAYFLOWER	12.00-14.00	_____	12.00-18.00
75	MDNTE CARLD BEACH	8.00	_____	10.00-15.00
7	MDNTEREY	10.00-12.00	_____	14.00-16.00
47	MT. RDYAL	10.00-12.00	_____	12.00-24.00
2	DCEAN VIEW	_____	16.00	16.00
76	PRESIDENT	10.00-17.00	_____	13.00-20.00
50	SAXDNY	12.00	_____	14.00-16.00
6	SEASIDE	14.00	_____	16.00-22.00
38	SDRRENTD	16.00	_____	18.00-22.00
74	STRAND DF ATLANTIC CITY	9.00-13.00	_____	12.00-16.00
67	TEPLITZKY'S	_____	_____	12.00-16.00
25	TRINIDAD	10.00-14.00	_____	14.00-20.00
73	TRDPICANA*	12.00	_____	12.00-18.00

*CDMBINATIDNS AVAILABLE, TWD RDDMS WITH CONNECTING BATH

TO ASSURE YOUR A.M.A. ACCOMMODATIONS AT THE 112th ANNUAL MEETING FILL IN COUPON BELOW:

RETURN TO
Circulation and Records Dept., AMA
535 North Dearborn Street, Chicago 10, Illinois

CUT HERE

FOR ADVANCE REGISTRATION OF PHYSICIANS

This coupon must be returned before May 28, 1963 to receive your advance registration identification card for Atlantic City. Your card will be sent to you on June 4 unless you request an earlier mailing date.

Name (please print) _____
(each physician must register in his own name)

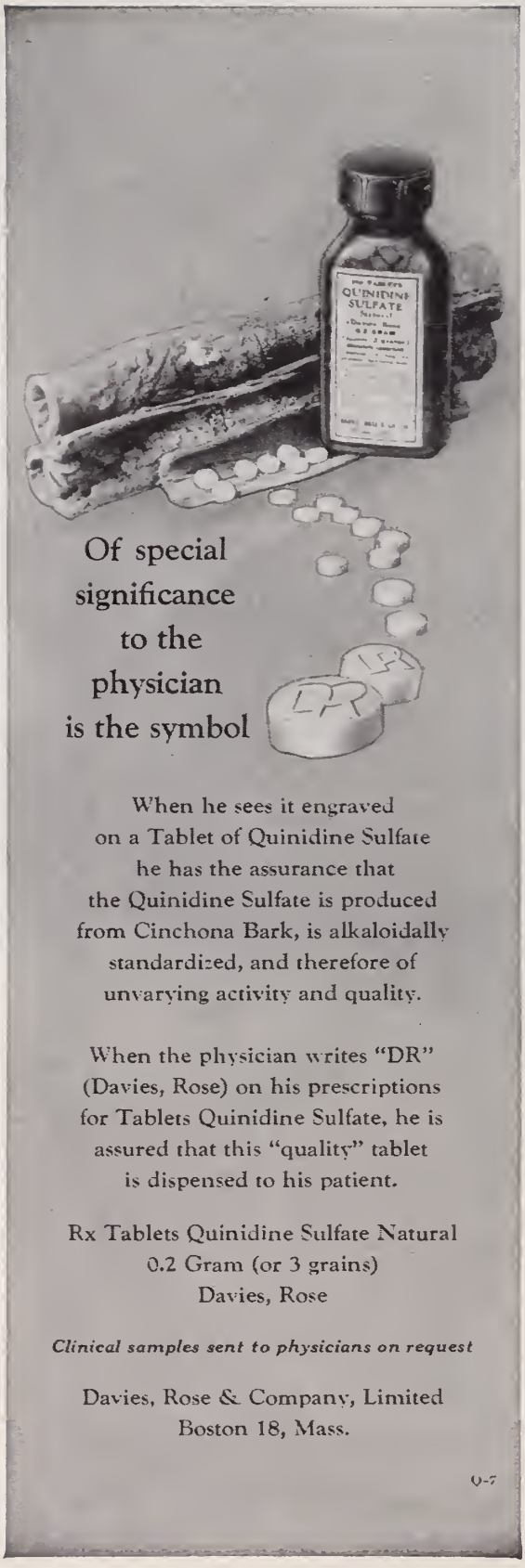
Address _____
City Zone State

I am a Member of the A.M.A. thru the _____ State Medical Association

or in the following government service: _____

Please check the one section in which you wish to be enrolled:

- ☐ Anesthesiology
- ☐ Dermatology
- ☐ Diseases of the Chest
- ☐ Experimental Medicine and Therapeutics
- ☐ Gastroenterology and Proctology
- ☐ General Practice
- ☐ Internal Medicine
- ☐ Laryngology, Otology and Rhinology
- ☐ Military Medicine
- ☐ Nervous and Mental Diseases
- ☐ Obstetrics and Gynecology
- ☐ Ophthalmology
- ☐ Orthopedic Surgery
- ☐ Pathology and Physiology
- ☐ Pediatrics
- ☐ Physical Medicine
- ☐ Preventive Medicine
- ☐ Radiology
- ☐ Surgery, General
- ☐ Urology
- ☐ Miscellaneous Topics:
 - ☐ Allergy
 - ☐ Maxillofacial Surgery
 - ☐ Iron Deficiency



Of special significance to the physician is the symbol

When he sees it engraved on a Tablet of Quinidine Sulfate he has the assurance that the Quinidine Sulfate is produced from Cinchona Bark, is alkaloidally standardized, and therefore of unvarying activity and quality.

When the physician writes "DR" (Davies, Rose) on his prescriptions for Tablets Quinidine Sulfate, he is assured that this "quality" tablet is dispensed to his patient.

Rx Tablets Quinidine Sulfate Natural
0.2 Gram (or 3 grains)
Davies, Rose

Clinical samples sent to physicians on request

Davies, Rose & Company, Limited
Boston 18, Mass.

Q-7

INDEX TO ADVERTISERS

Abbott Laboratories 22, 23
American Medical Association 37, 38, 39
Ames Company, Inc. 20

Bayer Company, The 28
Browne-McHardy Clinics 32
Burroughs Wellcome & Co. 33

Davies, Rose & Co., Ltd. 40

Endo Laboratories 21

First Texas Pharmaceuticals, Inc. 26

Katz & Besthoff, Ltd. 1

Lederle Laboratories 14, 15, 27
Lilly & Company, Eli Front Cover, 18
Louisiana Coca-Cola Bottling Co. 1
Louisiana State Board of Health Second & Third Covers

Majors Company, J. A. 1

Parke, Davis & Company 4, 5
Peacock Surgical Co., Inc. 32
Pfizer Laboratories 12, 13
Plano Medical Clinic 1
Poythress & Company, Inc., Wm. P. 6, 30
Professional Cards 41, 42
Professional Management Service 8

Robins Company, A. H. 9, 10, 11, 29
Roche Laboratories Back Cover
Sardeau, Inc. 36
Saunders Company, W. B. 3
Searle & Company, G. D. 19
Schering Corporation 17
Smith Kline & French Laboratories 16

Wallace Laboratories 7, 24, 25, 34, 35
Winthrop Laboratories 2, 31

PROFESSIONAL CARDS



Courtesy Parking

Adjacent to Building

BARRETT KENNEDY, M. D.

V. MEDD HENINGTON, M. D.

WM. J. PERRET, M. D.
(Associate)

DERMATOLOGY

4522 MAGNOLIA STREET

TWinbrook 1-4452 — 1-4453

Green Clinic

709 South Vienna Street — Ruston, Louisiana

Surgery
Marvin T. Green, M.D.
LaMoyne C. Bleich, M.D.

Obstetrics and Gynecology
Carl L. Langford, M.D.
David M. Hall, M.D.

Pediatrics
Bruce W. Everist, M.D.
O. Wharton Brown, Jr., M.D.

Eye, Ear, Nose and Throat
Harold H. Harms, M.D.

Radiology
M. Ragan Green, M. D.

Internal Medicine
Henry S. Roane, M.D.
Robert W. Sharp, M.D.
Joe L. Smith, Jr., M.D.

Dentistry
L. Felton Green, D.D.S.
Benjamin C. Baugh, D.D.

The Baton Rouge Clinic

134 North 19th St. — DI 8-5361

SURGERY
J. Sabatier, M. D.
Charles Mosely, M. D.
Charles S. Peter, Jr., M. D.

GYNECOLOGY & OBSTETRICS
Melvin Schudmak, M. D.
J. P. Griffon, M. D.
Donald C. Diefendorf, M. D.

UROLOGY
Mortimer Silvey, M. D.

GENERAL PRACTICE
Shirley J. Woodford, M. D.

INTERNAL MEDICINE
Charles Prosser, M. D.
Roger Reynolds, M. D.
(Allergy)
Bruce L. Baer, M. D.
(Gastroenterology)
Douglas Gordon, M. D.
(Endocrinology)
David D. Kahn, M. D.
(Hematology)

EYE
George H. Jones, M. D.

PHILIP RONALD LORIA, M. D.

DISEASES OF THE SKIN

Dermoplaning — **Removal of Excessive Hair**

1104 Maison Blanche Bldg. — New Orleans 16, La.
By Appointment — 524-9621

PROFESSIONAL CARDS

JOHN C. HARDIN, JR.
D.D.S., M.D., F.A.C.S.
Maxillo-Facial & Oral Surgery
(Head and Neck Surgery)
121 Physicians & Surgeons Bldg., West
Phone 3-6901 Shreveport, Louisiana

DR. NATHAN H. POLMER
Physical Medicine—Rehabilitation
2209 Carondelet St.
2 - 5 P. M.
Off.: JA 2-0171 Res.: JA 2-3946

JAMES W. BURKS, JR., M. D.
DISEASES OF THE SKIN
SURGICAL PLANING FOR COSMETIC DEFECTS
FACILITIES FOR REMOVAL OF SUPERFLUOUS HAIR
925 Maison Blanche Bldg.
New Orleans 16, La. 529-3322

DR. R. ROSS, JR.
SKIN DISEASES
802 Pere Marquette Bldg. JA 2-0202

DR. RICHARD W. VINCENT
PLASTIC AND RECONSTRUCTIVE SURGERY
34 Maes Court — Medical Plaza
3600 PRYTANIA STREET
TWinbrook 5-4561

JUSTILLIEN H. FORET, M. D.
Practice Limited to Psychiatry
3706 Prytania Street
899-2618 By Appointment

CHARLES I. BLACK, M. D.
DISEASES OF THE SKIN
4550 North Boulevard DIckens 3-2841
Baton Rouge, Louisiana

Business Management Consultants
for Individual Practices, Groups and Clinics
PROFESSIONAL MANAGEMENT SERVICE
700 Maison Blanche Bldg.
524-1177 New Orleans 16, La.

BLAISE SALATICH, D.D.S., M.D.
PRACTICE LIMITED TO ORTHOPEDIC SURGERY
1212 Maison Blanche Building
JAckson 2-7697 By Appointment

THE OWENS CLINIC
for
PLASTIC AND RECONSTRUCTIVE SURGERY
2223 Carondelet St. New Orleans 13, La.
Telephone: JAckson 2-0106
After Hours — Call Doctors' Exchange WH 5-4141

DR. HARTWIG M. ADLER
EYE, EAR, NOSE AND THROAT
Hours by appointment.
3439 Prytania Street TW. 1-4094
New Orleans

DR. CARL N. WAHL
Practice limited to
MAXILLO-FACIAL AND PLASTIC SURGERY
4500 Magnolia Street 891-6615

FRANK H. MAREK, M. D.
Radiologist
444 So. Ryan Street Lake Charles, La.
Phone HE 3-6361
Practice Limited to
X-ray and Radium Treatment and Diagnosis

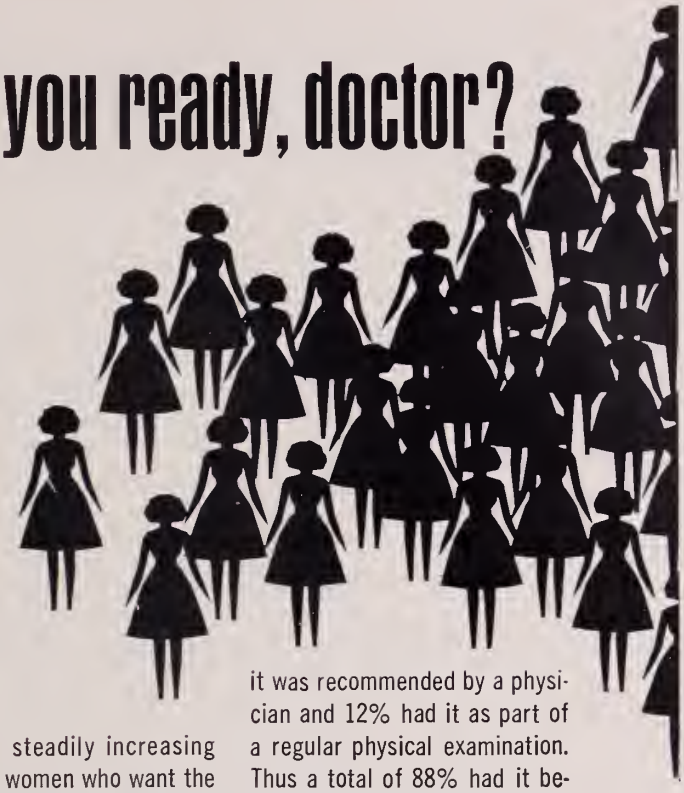
DR. HARRY ZOLLER
HEARING AND DEAFNESS
DISEASES AND SURGERY OF THE EAR
1109 Pere Marquette Building
JA. 5-2535 By Appointment

JOHN H. COUNCE, M. D.
Diseases of the Skin
1413 Delachaise St. New Orleans
Office Hours
By Appointment TW 1-2813

FREDERIC W. BREWER, M. D.
PRACTICE LIMITED TO PSYCHIATRY
1008 Maison Blanche Building
JA 5-4047 By Appointment

The Cancer Commission of the Louisiana State Medical Society

are you ready, doctor?



...for the steadily increasing number of women who want the "Pap" smear as part of their regular checkups? By 1961, the number who had this cytologic examination had climbed to an estimated 10,000,000!

While the American Cancer Society's educational program has succeeded in alerting women to the vital importance of the "Pap" smear, it is the physician who plays the key role. This was confirmed in a recent survey of women who had had the "Pap" smear. It was revealed that 76% had it because it was recommended by a physician and 12% had it as part of a regular physical examination. Thus a total of 88% had it because of physicians' actions.

As the number of uterine cytological examinations rises, the death rate from uterine cancer declines. Many authorities estimate that most deaths from this disease could be eliminated if these examinations were routinely performed. More and more women are ready for it and are willing to budget time and money for it. Are you ready for them, doctor?

AMERICAN CANCER SOCIETY

LOUISIANA DIVISION, INC.

204 Delta Building New Orleans 12, La.

Louisiana State Board of Health

W. J. REIN, M.D., President

specific for anxiety & tension

Librium

The singular specificity of Librium in controlling anxiety and tension has proven to be an advantage in a wide range of disorders characterized by anxiety of varying degrees. Notably effective in patients whose symptoms are primarily emotional, Librium is equally valuable when organic disease is aggravated or prolonged by accompanying anxiety. Coupled with its effectiveness is an outstanding record of safety. Librium has few, if any, of the unwanted side effects associated with tranquilizers and daytime sedatives—no extrapyramidal effects, no autonomic blocking, and no dulling of mental alertness. Consult literature and dosage information, available on request, before prescribing.

the successor to the tranquilizers

LIBRIUM® Hydrochloride—7-chloro-2-methylamino-5-phenyl-3H-1,4-benzodiazepine 4-oxide hydrochloride



ROCHE

RNAL of the

LOUISIANA STATE MEDICAL SOCIETY

MAY, 1963

LOUISIANA STATE MEDICAL SOCIETY

Formerly NEW ORLEANS MEDICAL and SURGICAL JOURNAL

OFFICIAL ORGAN OF THE LOUISIANA STATE MEDICAL SOCIETY

Copyright 1963 by
isiana State Medical Society.
.00 per annum, 35¢ per copy

Vol. 115, No. 5

Published monthly by
The Journal of the Louisiana State
Medical Society, Inc.
1430 Tulane Ave., New Orleans 12

Contents

The Pathogenesis of Ascites and Its Surgical Treatment 157
John L. Madden, M. D., New York

DBI: A General Discussion and an Evaluation 163
Sol B. Stern, Jr., M. D., New Orleans

Carcinoma of the Cervical Esophagus and Hypopharynx: Case Report and Method of Management 169
Charles W. Pearce, M. D. and Robert J. Schramel, M. D., New Orleans

Biopsy of the Prostate 174
W. L. Geissler, M. D., J. H. Campbell, M. D., E. C. St. Martin, M. D., and C. M. Pasquier, Jr., M. D., Shreveport



Observations on Acute Athletic Ligamentous Injuries to the Knee 178
C. W. Lowrey, M. D., P. M. Davis, Jr., M. D., and T. E. Banks, M. D., Alexandria

Editorial 181

Organization Section 183

Medical News Section 185

Book Reviews 188

Index to Advertisers 36

LIBRARY
MAY 28 1963

Simple diarrhea?

Control it with

safe / effective / economical / pleasant-tasting

Quintess®

(attapulgite compound, Lilly)

Available in 6-ounce plastic and 1-pint glass bottles.

Eli Lilly and Company • Indianapolis 6, Indiana, U.S.A.

Lilly

362030

Second Class Mail Privileges Authorized at New Orleans, Louisiana

ORAL POLIO VIRUS VACCINE

The live oral polio virus vaccine (Sabin) is now available in adequate supply. The U.S. Public Health Service has assured us of its relative safety. At its meeting on February 12, 1963, the Orleans Parish Medical Society voted to conduct a mass immunization campaign with the oral polio vaccine. It is to be hoped that every physician in the New Orleans area will give his wholehearted support to this campaign, and that every parish medical society in Louisiana will support a similar program.

Although the Salk vaccine did a great job in reducing the incidence of poliomyelitis, it did so by affording a certain amount of protection against clinical symptoms of the disease, but did not prevent a vaccinee from contracting subclinical polio virus infections and thereby participating in the spread of the polio virus within a community. The live oral vaccine not only protects against the clinical effects of polio, but also prevents the vaccinee from contracting polio virus infections. Consequently, in an adequately immunized population the polio virus does not gain a foothold and could be excluded completely from the community—a major consideration.



Louisiana State Board of Health

W. J. REIN, M.D.

President



BOTTLED UNDER AUTHORITY OF THE COCA-COLA COMPANY BY
THE LOUISIANA COCA-COLA BOTTLING CO., LTD.



You Know--

that we know!

TRUSTED MANY MILLIONS OF TIMES

GOOD DRUG STORES ONLY THE BEST
Katz & Besthoff, Inc.

Prescription Headquarters Since 1905

MEDICAL BOOKS

Of All Publishers

Any book on Medicine, Surgery, and Nursing

J. A. MAJORS COMPANY

147 South Liberty St.

NEW ORLEANS 12, LA.

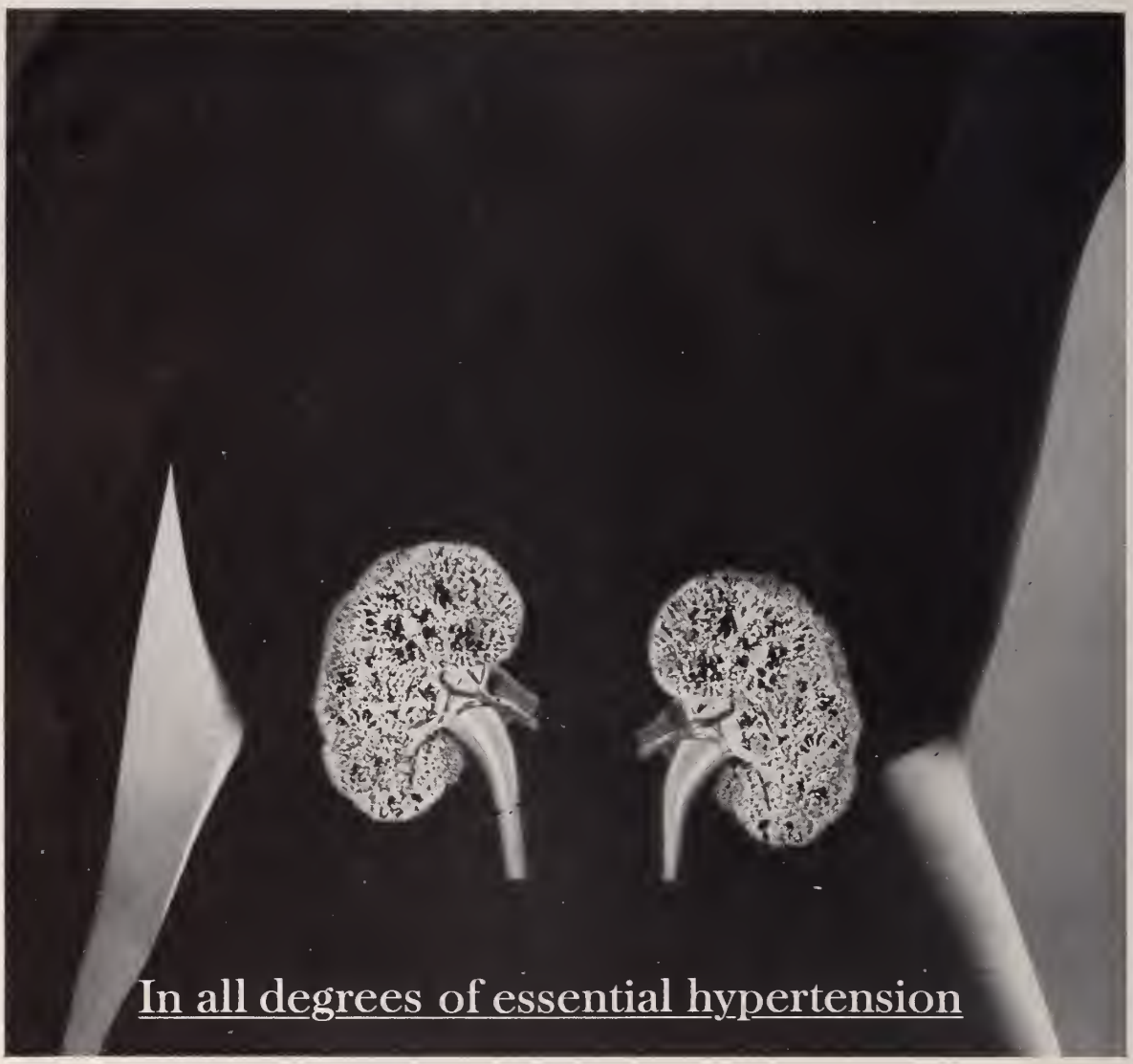
——Catalogs cheerfully sent upon request——

ANNUAL MEETING

Louisiana State Medical Society

MAY 6-8, 1963

NEW ORLEANS



Protect the kidneys and other threatened organs with Rautrax-N

SQUIBB STANDARDIZED RAUWOLFIA SERPENTINA WHOLE ROOT AND BENDROFLUMETHIAZIDE WITH POTASSIUM CHLORIDE

When treatment of hypertension is effective, the danger of damage to the renal system is reduced.[1,2] "Hypertensive patients suffer from vascular deterioration roughly proportional to the severity of the hypertension. ...Reduction of blood pressure to normotensive levels reduces or arrests the progress of vascular damage with a resultant decrease in morbidity and mortality. Among two comparable groups of patients with [nonmalignant] hypertension of equal severity, 72 per cent of those treated were still living after five years or more, while only 24 per cent of those not treated were alive at the end of this period."[1] *Because Rautrax-N lowers blood pressure so effectively, it will provide this important protection for your hypertensive patients.*

Rautrax-N—a combination of Raudixin, Squibb Standardized Rauwolfia Serpentina Whole Root, and the diuretic, Naturetin, Squibb Bendroflumethiazide—is effective in mild,[4] moderate[3,4] or severe hypertension.[3,5] It lowers blood pressure gently and gradually. And control of hypertension helps protect not only the kidneys but also the heart and brain from vascular damage.[2] For full information, see your Squibb Product Reference or Product Brief.

Supply: Rautrax-N—capsule-shaped tablets providing 50 mg. Raudixin, 4 mg. Naturetin, and 400 mg. potassium chloride. *Rautrax-N Modified*—capsule-shaped tablets providing 50 mg. Raudixin, 2 mg. Naturetin, and 400 mg. potassium chloride.

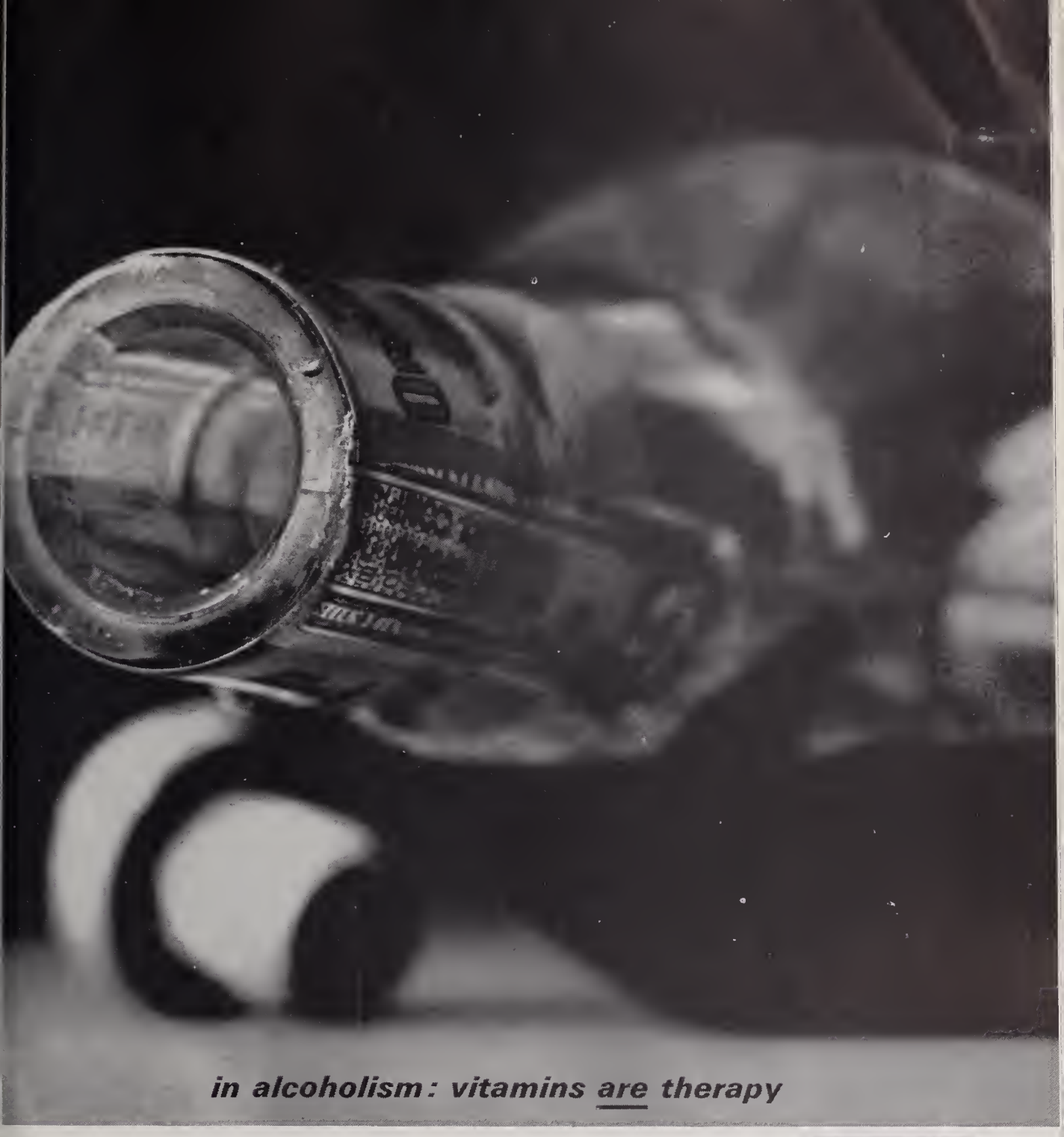
References: (1) Moyer, J. H., and Heider, C.: Am. J. Cardiol. *9*:920 (June) 1962. (2) Brest, A. N., and Moyer, J. H.: Pennsylvania M. J. *63*:545 (Apr.) 1960. (3) Hutchison, J. C.: Current Therap. Res. *4*:610 (Dec.) 1962. (4) Berry, R. L., and Bray, H. P.: J. Am. Geriatrics Soc. *10*:516 (June) 1962. (5) Feldman, L. H.: North Carolina M. J. *23*:248 (June) 1962.

'RAUTRAX'®, 'RAUDIXIN'® AND 'NATURETIN'® ARE SQUIBB TRADEMARKS.

SQUIBB

Squibb Quality—the Priceless Ingredient

SQUIBB DIVISION Olin



in alcoholism: vitamins are therapy

A full "comeback" for the alcoholic is partly dependent on nutritional balance... ided by therapeutic allowances of B and C vitamins. Typically, the alcoholic patient s seriously undernourished... from long-standing dietary inadequacy, from depleion of basic reserves of water-soluble vitamins.

FOR PROFESSIONAL RECOMMENDATION ONLY

Each capsule contains: Vitamin B_1 (Thiamine Mononitrate)...10 mg. / Vitamin B_2 (Riboflavin)...10 mg. / Niacinamide... 00 mg. / Vitamin C (Ascorbic Acid)...300 mg. / Vitamin B_6 (Pyridoxine HCl)...2 mg. / Vitamin B_{12} Crystalline... mcgm. / Calcium Pantothenate...20 mg. Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin leficiencies. Supplied in decorative "reminder" jars of 30 and 100.

Lederle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.

6315-3

STRESSCAPS®

Stress Formula Vitamins Lederle





the patient under physiologic stress...

a prime candidate for MYADEC®

high-potency vitamin formula with minerals

It is generally agreed that vitamin requirements are often increased after surgery, during acute or chronic stages of disease, throughout convalescence, and at other times of physiologic stress. Moreover, nutritional intake may be inadequate as a result of restricted diets. In conditions such as these, MYADEC can provide an extra measure of support. Just one capsule a day provides 9 vitamins in therapeutic potencies, plus a supplement of selected minerals normally present in body tissues. MYADEC is also useful for the prevention of vitamin deficiencies in patients whose usual diets are lacking in these important food factors.

Each MYADEC capsule contains: **Vitamins:** Cyanocobalamin—5 mcg.; Riboflavin—10 mg.; Pyridoxine hydrochloride—2 mg.; Thiamine mononitrate—10 mg.; Nicotinamide—100 mg.; Ascorbic acid—150 mg.; Vitamin A—(7.5 mg.) 25,000 units; Vitamin D—(25 mcg.) 1,000 units; *d*-alpha-tocopheryl acetate concentrate—5 I.U. **Minerals:** Iodine—0.15 mg.; Manganese—1 mg.; Cobalt—0.1 mg.; Potassium—5 mg.; Molybdenum—0.2 mg.; Iron—15 mg.; Copper—1 mg.; Zinc—1.5 mg.; Magnesium—6 mg.; Calcium—105 mg.; Phosphorus—80 mg. (Minerals supplied as potassium iodide, dibasic calcium phosphate, sodium molybdate, and the sulfates of manganese, cobalt, potassium, iron, copper, zinc, and magnesium.) 13663

Bottles of 30, 100, and 250.

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit 32, Michigan

Solfoton®

for mild, continuous sedation

Each tablet (or capsule) contains 16 mg. phenobarbital blended with 65 mg. Bensulfoid®. The Bensulfoid is an inert diluent present to permit slow absorption of the phenobarbital. The usual dosage is one tablet or capsule after meals and at bedtime. Solfoton is especially adapted to prolonged use because of its virtual freedom from depression and other side effects. Contra-indications: identical to those of ¼ gr. phenobarbital.

REFER TO PDR

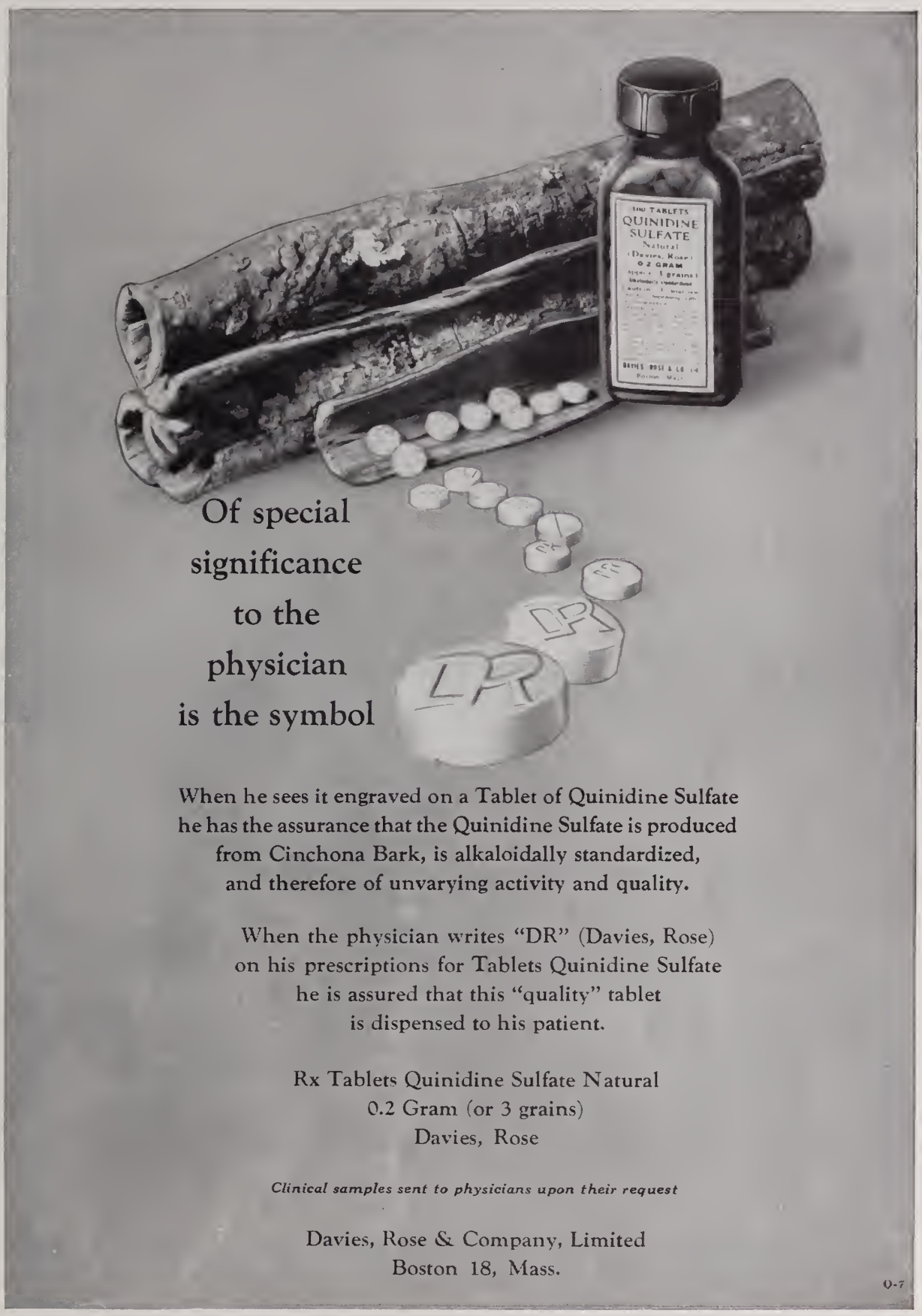
Poythress, White Section, Page 808 (1963 edition) and Product Identification Section

COMPLETE INFORMATION AND CLINICAL SAMPLES SENT UPON REQUEST

Dispensed in bottles of 100 and 500 tablets or capsules

WM. P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA

Manufacturers of ethical pharmaceuticals since 1856



Of special significance to the physician is the symbol

When he sees it engraved on a Tablet of Quinidine Sulfate he has the assurance that the Quinidine Sulfate is produced from Cinchona Bark, is alkaloidally standardized, and therefore of unvarying activity and quality.

When the physician writes "DR" (Davies, Rose) on his prescriptions for Tablets Quinidine Sulfate he is assured that this "quality" tablet is dispensed to his patient.

Rx Tablets Quinidine Sulfate Natural
0.2 Gram (or 3 grains)
Davies, Rose

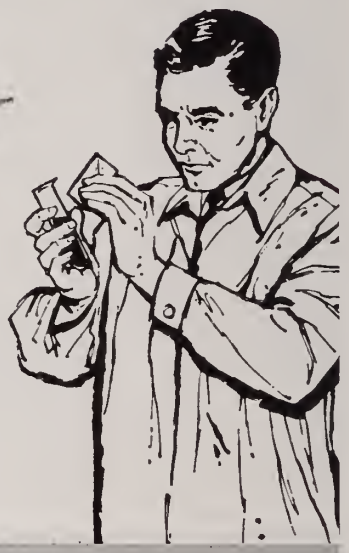
Clinical samples sent to physicians upon their request

Davies, Rose & Company, Limited
Boston 18, Mass.

O-7

PROFESSIONAL MANAGEMENT SERVICE CAN HELP YOU BE A

FULL-TIME DOCTOR



Delegation of time-consuming work not requiring your training and experience releases you to more productive and rewarding work only you can do. The Professional Management Service is equipped to save you time . . . to relieve you and your staff of both menial and critical business tasks . . . and to increase your income. Our service offers you the benefits of specially trained, and equipped personnel under the careful supervision of specialists in medical business management, however you maintain complete control of your business activities!

We Offer These Services -

ACCOUNTS RECEIVABLE MANAGEMENT Professional Management Service trained bookkeepers, electric equipment and modern, proven-in-use methods designed to the needs of medical accounts are used to minimize the business workload in your office. Professional, accurate, itemized statements encourage prompt payment. This service pays big dividends in good will, time savings and net dollar return.

CONSULTATION Professional Management Service also includes special services, as needed, such as counseling on all insurance, investments, office personnel, fees, office lay-out, etc.

BASIC BOOKKEEPING SERVICE Formal accounting records are maintained by Professional Management Service. This includes income and expenses, depreciation, capital accounts, monthly financial report and tax return preparation.

PRE-COLLECTION PROGRAM A constructve approach to slow-paying accounts, subject to your control, this service is used with the ARM Service, above, or to supplement billing by your own staff. Custom designed to your needs and policies, but all time-consuming work is done by Professional Management Service.

COMPREHENSIVE BUSINESS SERVICE Most beneficial to physicians is the assumption of the complete business side of practice by the Professional Management Service in a co-ordinated, comprehensive service encompassing all functions named above.



PROFESSIONAL MANAGEMENT SERVICE

New Orleans, Louisiana

700 MAISON BLANCHE BLDG., PHONE 524 1177

A Specialized Service . . . Exclusively Professional

throughout the wide middle range of pain — control with one analgesic **PERCODAN®** *tablets*

(Salts of Dihydrohydroxycodeinone and Homatropine, plus APC)

In a comprehensive range of indications marked by moderate to moderately severe pain, PERCODAN *assures speed, duration, and depth of analgesia by the oral route... acts within 5 to 15 minutes... usually provides uninterrupted relief for 6 hours or longer with just 1 tablet... rarely causes constipation.*



Formula — Each scored yellow PERCODAN* Tablet contains 4.50 mg. dihydrohydroxycodeinone HCl (Warning: May be habit-forming), 0.38 dihydrohydroxycodeinone terephthalate (Warning: May be habit-forming), 0.38 mg. homatropine terephthalate, 224 mg. acetylsalicylic acid, 160 mg. acetophenetidin, and 32 mg. caffeine. Also available: PERCODAN®-DEMI, containing the complete PERCODAN formula but with only half the amount of salts of dihydrohydroxycodeinone and homatropine. Both products are on oral Rx in all states where laws permit. **Average Adult Dose**—1 tablet every 6 hours. **Side Effects and Contraindications**—Although generally well tolerated, PERCODAN may cause nausea, emesis, or constipation in some patients. PERCODAN should be used with caution in patients with known idiosyncrasies to acetylsalicylic acid or acetophenetidin and in those with blood dyscrasias. *Literature on request.* **ENDO LABORATORIES Richmond Hill 18, New York**

Endo®

*U.S. Pats. 2,628,185 and 2,907,768



If you don't have fluoride in your water...



...you should know about new Vi-Daylin® w/Fluoride with entrapped flavor

The evidence is in. More than 8,000 published reports verify the effectiveness and safety of fluoride as prophylaxis against dental caries. Yet most communities today are still without water fluoridation.

If you are in such an area, new Vi-Daylin w/Fluoride is an almost ideal means of supplementation for children. For three reasons:

1. Each tablet contains the equivalent of 1 mg. fluoride. This is the amount suggested for children three and over by the American Dental Association.*[1,2]

2. As in regular Vi-Daylin Chewable, your patient gets the benefit of *entrapped flavor*. This ingenious, double-coating process permits complete entrapment of raw vitamin tastes and odors—and keeps delicate flavoring oils fresh until the moment of use. Result: A tablet that tastes like citrus candy.

3. Sweetened with sugar-free Sucaryl®. Because Sucaryl is non-nutritive, it will not react with bacteria to form acids in the mouth.

Cost? No more than regular Vi-Daylin Chewable in economical bottles of 100.

75TH ANNIVERSARY ABBOTT

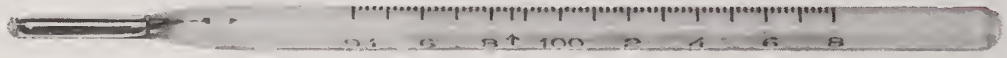
1. Prescribing Supplements of Dietary Fluorides, Council of Dental Therapeutics, J.A.D.A., 56:591, April, 1958.
2. Fluoride Compounds, Accepted Dental Remedies, 27th Ed.:139, 1962.

VI-DAYLIN w/FLUORIDE—Multivitamins with Fluoride. SUCARYL—Abbott's Non-Caloric Sweetener.

*In areas where drinking water is substantially devoid of fluoride.

304213

one answer... three minutes





three answers ...ten seconds

DIP AND READ

combistix®

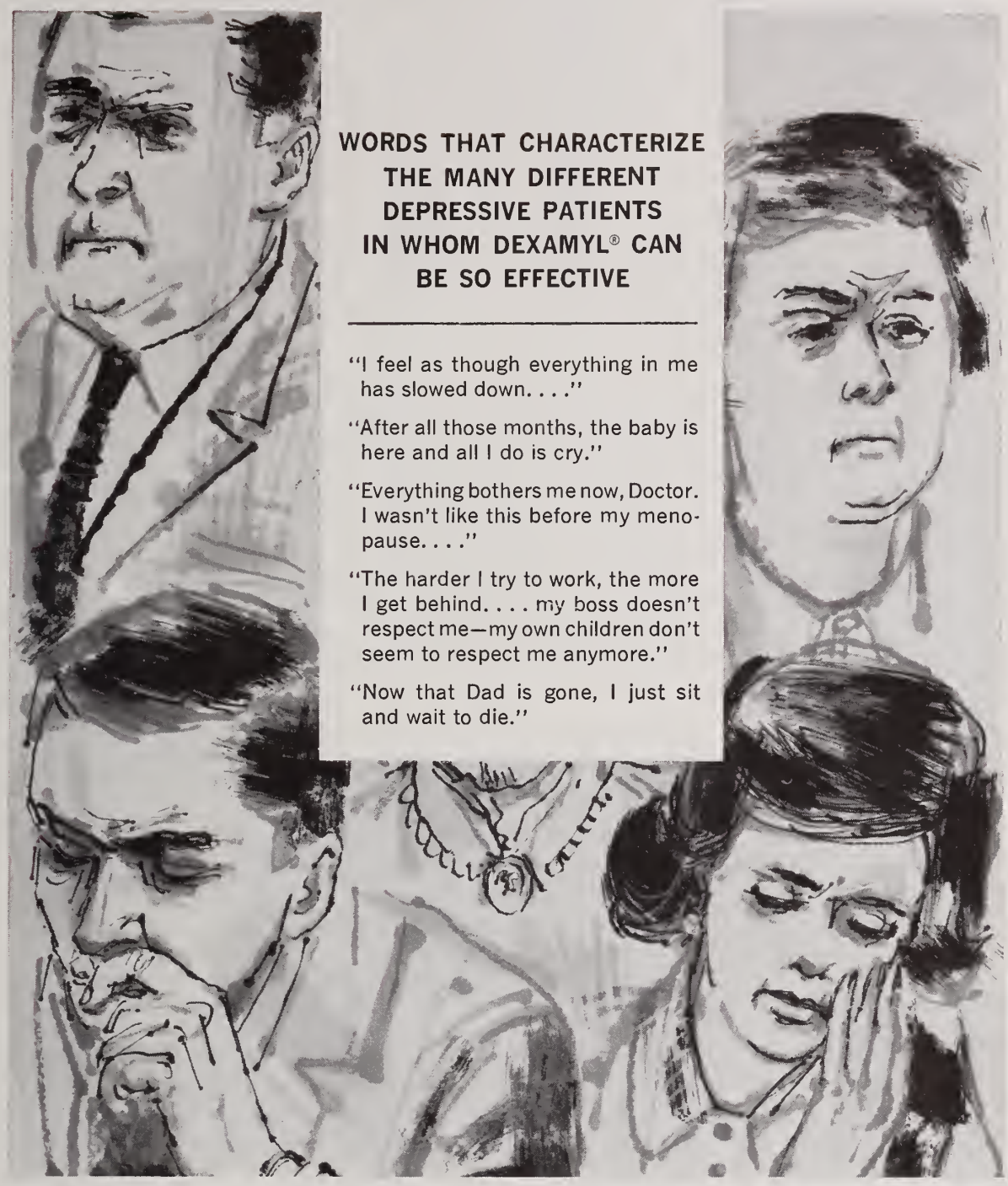
urine protein • glucose • pH

BASIC COMBINATION TEST FOR BEDSIDE AND OFFICE

... faster than taking temperature. Detects glucosuria (as in diabetes), proteinuria (as in renal disorder), abnormal pH (as in calcinosis or GU infection). For routine screening of all patients. COMBISTIX—*basic as the stethoscope.*

AMES products are available through your regular supplier. 38263

AMES
COMPANY INC
Elkhart • Indiana
Toronto • Canada



WORDS THAT CHARACTERIZE THE MANY DIFFERENT DEPRESSIVE PATIENTS IN WHOM DEXAMYL® CAN BE SO EFFECTIVE

"I feel as though everything in me has slowed down. . . ."

"After all those months, the baby is here and all I do is cry."

"Everything bothers me now, Doctor. I wasn't like this before my menopause. . . ."

"The harder I try to work, the more I get behind. . . . my boss doesn't respect me—my own children don't seem to respect me anymore."

"Now that Dad is gone, I just sit and wait to die."

DEXAMYL® SPANSULE® brand of sustained release capsules

FORMULA: Each 'Spansule' capsule No. 1 contains 10 mg. of Dexedrine® (brand of dextro amphetamine sulfate), and 1 gr. of amobarbital, derivative of barbituric acid [Warning, may be habit forming]. Each 'Spansule' capsule No. 2 contains 15 mg. of 'Dexedrine' (brand of dextro amphetamine sulfate) and 1½ gr. of amobarbital [Warning, may be habit forming]. The active ingredients of the 'Spansule' capsule are so prepared that a therapeutic dose is released promptly and the remaining medication, released gradually and without interruption, sustains the effect for 10 to 12 hours.

INDICATIONS: (1) For mood elevation in depressive states; (2) for control of appetite in overweight.

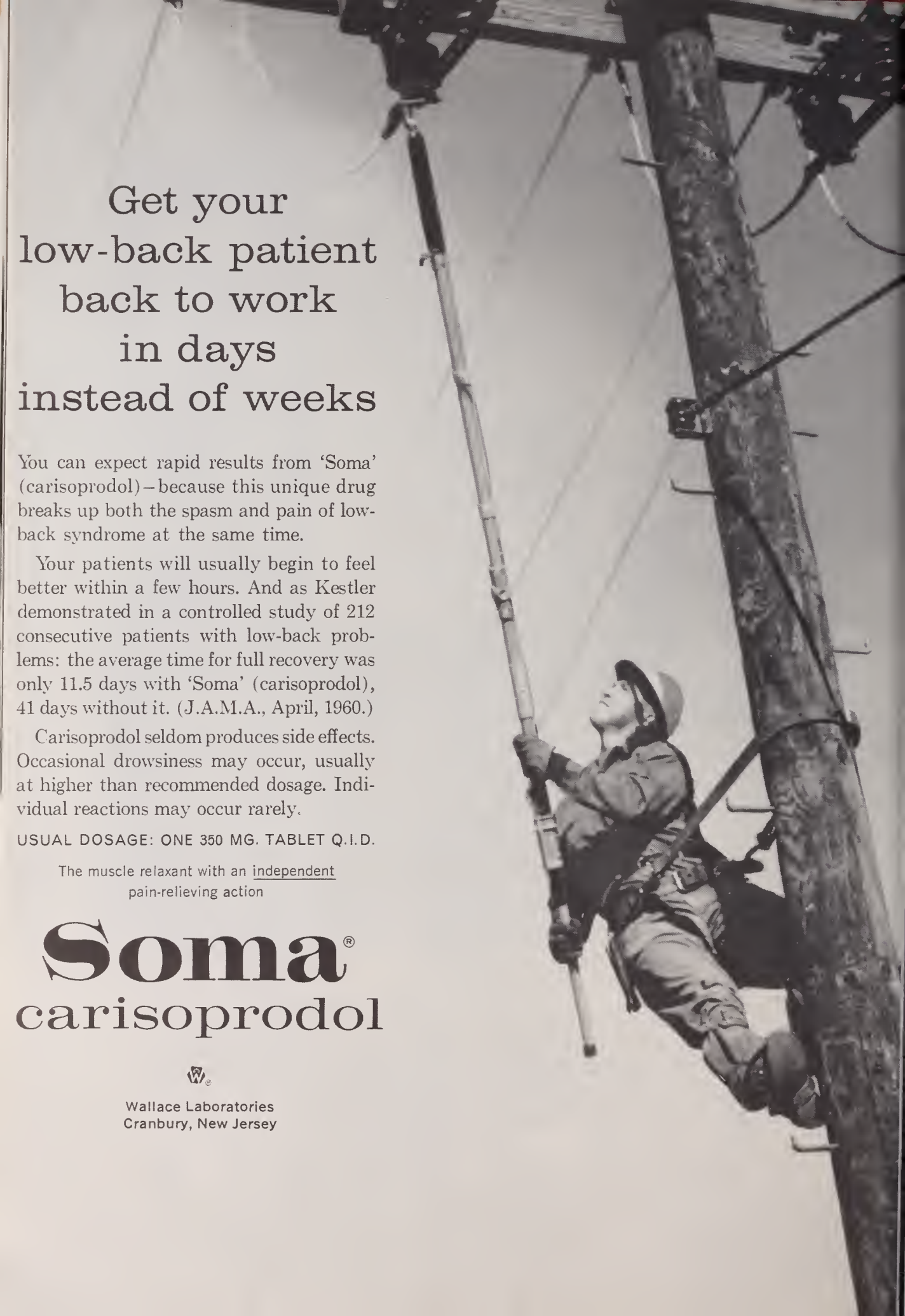
USUAL DOSAGE: One 'Dexamyl' *Spansule* capsule taken in the morning for 10- to 12-hour effect.

SIDE EFFECTS: Insomnia, excitability and increased motor activity are infrequent and ordinarily mild.

CAUTIONS: Use with caution in patients hypersensitive to sympathomimetics or barbiturates and in coronary or cardiovascular disease or severe hypertension. Excessive use of the amphetamines by unstable individuals may result in a psychological dependence; in these rare instances withdrawal of medication is recommended. It is generally recognized that in pregnant patients all medications should be used cautiously, especially in the first trimester.

SUPPLIED: 'Spansule' capsules No. 1 (1 dot on capsule) and No. 2 (2 dots on capsule), in bottles of 50. *Prescribing information Jan. 1963.*

Smith Kline & French Laboratories SK&F



Get your low-back patient back to work in days instead of weeks

You can expect rapid results from 'Soma' (carisoprodol)—because this unique drug breaks up both the spasm and pain of low-back syndrome at the same time.

Your patients will usually begin to feel better within a few hours. And as Kestler demonstrated in a controlled study of 212 consecutive patients with low-back problems: the average time for full recovery was only 11.5 days with 'Soma' (carisoprodol), 41 days without it. (J.A.M.A., April, 1960.)

Carisoprodol seldom produces side effects. Occasional drowsiness may occur, usually at higher than recommended dosage. Individual reactions may occur rarely.

USUAL DOSAGE: ONE 350 MG. TABLET Q.I.D.

The muscle relaxant with an independent pain-relieving action

Soma®
carisoprodol

Wallace Laboratories
Cranbury, New Jersey

from the feet up—clears ringworm economically with half the dosage

Schering

fulvicin-u/f®

griseofulvin, ultra/fine, Schering

"Culture negative" after four weeks in this case of plantar tinea pedis

R. B., a 36-year-old writer, was first seen on November 5, 1962, with severe inflammatory tinea pedis involving the sole of the right foot. There was an 8-centimeter area of erythema, with vesicles, bullae and scales on the plantar surface of the foot. The lesion had been present for two weeks. Microscopic examination of scrapings showed hyphae, and cultures grew out *T. mentagrophytes.*

The patient was started on 0.5 gm. FULVICIN-U/F (griseofulvin, *ultra-fine*) daily. Three weeks later there was distinct improvement with only mild erythema and scaling present. After one additional week, therapy was discontinued and a second culture was negative. The patient was last seen on December 24, approximately three weeks after termination of therapy. At this time the skin was entirely normal in appearance.







1 Plantar tinea pedis before therapy.

2 After two weeks of therapy.

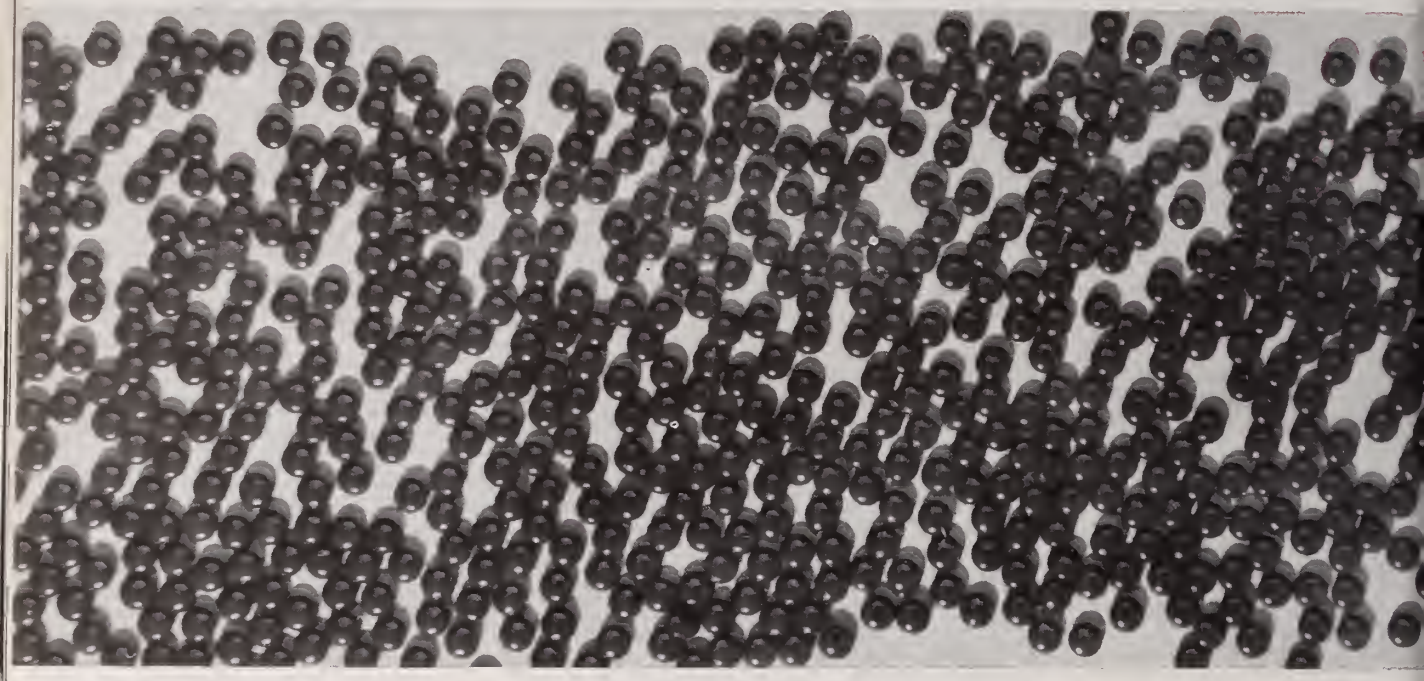
3 Six weeks later, skin essentially normal (two weeks after termination of therapy).

Clinical considerations: Although clinical studies with griseofulvin have not revealed evidence of serious toxicity, ***side effects***—as with any potent drug or antibiotic—may occur in some patients. An occasional minor decrease in leukocyte count has been observed, which was reversible when medication was discontinued. Occasionally, there may be heartburn, nausea, epigastric discomfort, diarrhea, lethargy, fatigue, psychomotor incoordination and, during the first week of therapy, headache. Studies are in progress to determine the safety of this drug during pregnancy; until the results of these studies are available, griseofulvin is contraindicated during pregnancy. ***Caution*** should be observed in patients with known penicillin-sensitivity. Should urticaria or drug rash develop, the drug should be withdrawn. ***Available*** in 125 mg., 250 mg. and 500 mg. scored tablets, bottles of 60 and 250.

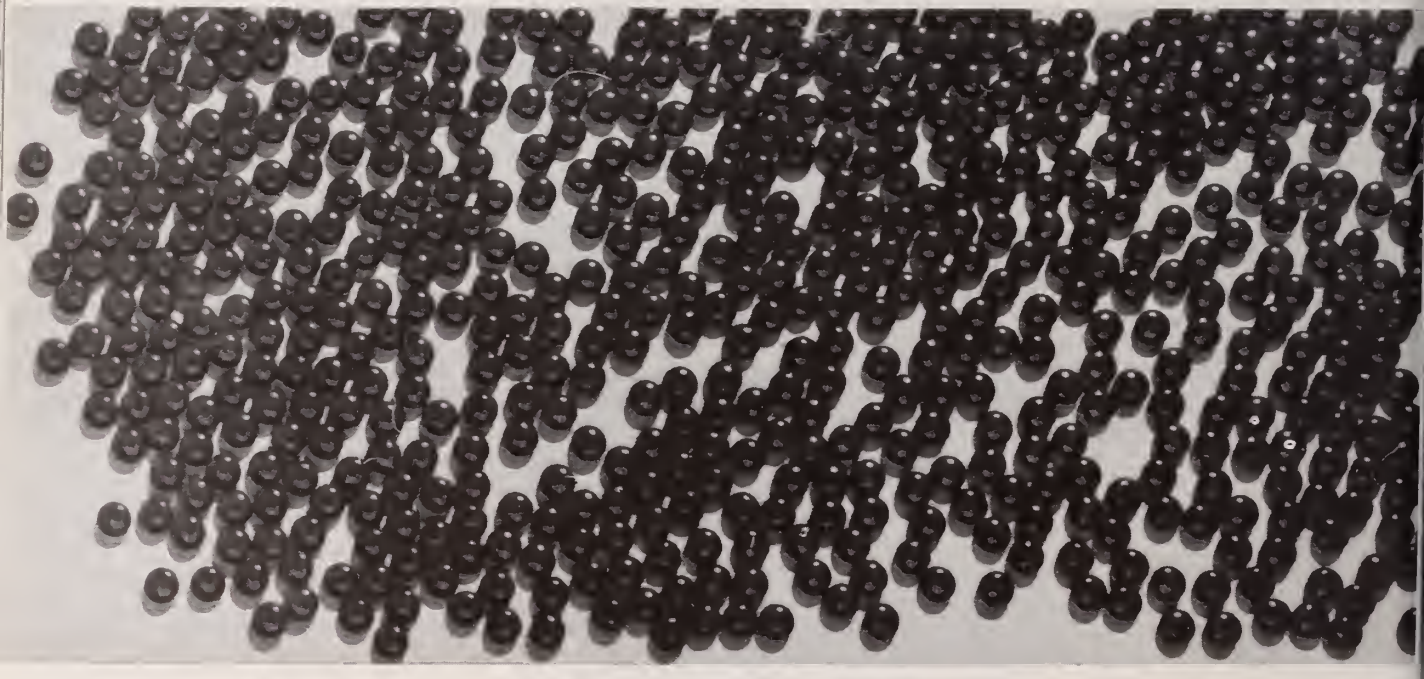
For complete details, consult Schering literature available from your Schering Representative or Medical Services Department, Schering Corporation, Union, New Jersey.

CASE HISTORY AND PHOTOGRAPHS COURTESY OF LEO R. LESE, M.D., NEW YORK, N. Y.

This is half an inspection



. . . this is the other half



Inspecting a coated tablet poses a two-sided problem: How do you make certain that both top and bottom are flawless without picking up each tablet and turning it? ■ We have a machine especially designed to do the job. The tablets pass along a belt under the watchful eye of an inspector. Any tablet that has the slightest irregularity in shape or coating is rejected. Then a second belt overrides the first and, holding the tablets tightly in place, turns them over and delivers them to another belt for inspection of the other side. ■ It is another in a long series of control measures designed to deliver quality pharmaceuticals every time.

Eli Lilly and Company • Indianapolis 6, Indiana, U. S. A.

Lilly

390079

The Journal

of the

Louisiana State Medical Society

$4.00 Per Annum, 35c Per Copy
Vol. 115, No. 5

MAY, 1963

Published Monthly
1430 Tulane Avenue, New Orleans 12, La.

The Pathogenesis of Ascites And Its Surgical Treatment*

• From both the clinical and experimental data presented, the primary cause of ascites appears to be obstruction of the outflow tract of the liver, i.e., the hepatic veins. On the basis of the pathologic changes which occur in cirrhosis of the liver with irreversible ascites, surgical management is discussed.

JOHN L. MADDEN, M. D.
New York

Introduction

IN patients with cirrhosis of the liver, intractable ascites may be the primary clinical manifestation. Contrariwise, bleeding alone may be the first symptoms or bleeding and ascites may occur concomitantly. The perplexing question is: "What is the cause (or causes) for the variations in the symptoms manifest?"

In search for an answer to this question it was thought that a study of the intrahepatic vascular systems in the normal liver compared with the anatomic pathologic changes which occur in cirrhosis of the liver with intractable ascites and with bleeding might prove informative. The results of such a study are herein presented.

Method of Study and the Results Obtained

Fresh necropsy specimens of the normal and cirrhotic livers were obtained. The livers that were removed from patients with cirrhosis were separated into two groups dependent upon the associated clinical symptoms. Group I was comprised of the liver specimens from patients with intractable ascites. Group II comprised the specimens from patients who had one or more episodes of bleeding from esophageal varices.

In each liver specimen the hepatic artery, the portal vein and the hepatic veins were injected with colored solutions of neoprene latex, type 571. A red colored solution was used for the hepatic artery, yellow for the portal vein and blue for the hepatic or systemic veins. The liver parenchyma was then digested using commercial (30 per cent) hydrochloric acid and the patterns of the intrahepatic vascular systems in the normal and diseased livers were compared.

In the normal liver, the hepatic arterial (red) and portal venous (yellow) intrahepatic vascular systems were in close approximation and distinctly separated from the hepatic venous (blue) bed. Moreover a uniformity in the morphologic appear-

* Presented at the Twenty-sixth annual Meeting of The New Orleans Graduate Medical Assembly, New Orleans, March 6, 1963.

From the Department of Surgery and the Institute of Medical Research, St. Clare's Hospital, New York.

ances of the different vascular systems was observed. There was no admixture of the dyes either pre- or post-sinusoidal. However, the casts of the diseased liver specimens showed characteristic anatomic pathologic changes dependent upon whether bleeding or intractable ascites was present clinically.

In the liver specimens from patients who bled only, there was a symmetrical deficit in all of the vascular systems. The intrahepatic vascular pattern was almost identical in appearance to McIndoe's[7] celloidin casts of liver specimens from patients with cirrhosis. This type of vascular pattern led McIndoe to conclude that in cirrhosis of the liver there was a progressive obliteration in all of the intrahepatic vascular systems which terminated in death when the hepatic arterial system was sufficiently compromised.

In the liver specimens obtained from patients who died with intractable ascites, constant and characteristic anatomic pathologic changes in the vascular systems were present. These were characterized by an extensive organic obliterative fibrosis of the hepatic veins (blue), the common outflow tract of the liver, and an absolute increase in the portal venous (yellow) and hepatic arterial (red) vascular beds, the inflow tracts.

The increase in the intrahepatic portal bed in cirrhosis with intractable ascites would explain why Herrick,[3] gram for gram of liver substance, used a greater volume of fluid in perfusion of the portal system in the cirrhotic than in the normal liver. Similarly, the symmetrical deficit in all of the intrahepatic vascular beds in cirrhosis with bleeding and/or ascites of the functional or reversible type, would explain why the results of the perfusion and liver corrosion studies of McIndoe were diametrically opposed to the findings of Herrick. However, if one is permitted to make what appear to be logical assumptions, the conclusions of both investigators, even though apparently opposite, may be proved correct.

Neither Herrick nor McIndoe[7] stated specifically whether or not their perfusion studies were done on liver specimens obtained from patients with bleeding only or with intractable ascites. Furthermore, McIndoe[7] did not specify the related clinical symptoms in the patients with cirrhosis whose livers were injected with celloidin and subsequently corroded. Accordingly, if it is permissible to assume that Herrick used livers from patients with cirrhosis and intractable ascites, and McIndoe[7] livers from patients with cirrhosis but without ascites, then the propositions of both investigators would be correct.

A liver specimen was obtained from a patient who died in congestive heart failure, in whom anasarca was present. The corroded specimen showed a marked increase in the outflow tract, the hepatic veins (blue) secondary to stasis or functional obstruction that also prevails in chronic constrictive pericarditis. In cirrhosis of the liver with reversible ascites, the obstruction of the outflow tract is also functional and due to a congestive hepatomegaly.

From the results of the study presented it is concluded that most commonly the cause of ascites is an obstruction of the outflow tract of the liver, the hepatic veins. In patients with reversible ascites the obstruction is functional and due to a congestive hepatomegaly. In intractable ascites, the obstruction is organic and secondary to an obliterative fibrosis of the outflow tract, the hepatic veins.

Comment

The postulate of obstruction of the outflow tract of the liver, the hepatic veins, as a cause of ascites is believed substantiated both clinically and experimentally.

Clinically, in addition to congestive heart failure and chronic constrictive pericarditis as previously mentioned, ascites is a prominent symptom in the Budd-Chiari syndrome. This syndrome is caused by a selective endophlebitis and thrombotic occlusion of the hepatic veins. Contrariwise, in extensive intrahepatic and extrahepatic thrombotic occlusion of the portal vein (inflow tract), either suppurative (pylephlebitis) or non-suppurative, or

when the portal vein is ligated, ascites is absent. Furthermore, infrahepatic occlusion of the inferior vena cava, either spontaneous or by operation, does not cause ascites.

In the experimental animal (dog), partial occlusion of the thoracic segment of the inferior vena cava to one third of its normal diameter is productive of ascites. In such preparations the suprahepatic occlusion of the vena cava is cephalad to the hepatic veins and causes an outflow block to the liver. To substantiate this more specifically, two sets of animal (dog) experiments were done. In the first set the hepatic veins were selectively occluded by ligature over a 3 mm. probe. If the veins were occluded too tightly, the animal died, and if too loosely, ascites did not occur. Ascites was produced in 9 of the 15 animals studied. Characteristically the ascites would persist four weeks and disappear spontaneously concomitant with the development of an adequate collateral venous circulation.

In the second set of experiments performed to show the specificity of occlusion of the hepatic veins as a cause of ascites, the method previously described by Kling and Allen[5] was used. A plastic cannula was inserted into the segment of the superior vena cava which receives the hepatic vein tributaries. Theoretically the cannula would maintain patency of blood flow in the vena cava and concomitantly cause a gradual and selective endophlebitic occlusion of the orifices of the hepatic veins with resulting ascites. However, thrombotic occlusion of the lumen of the cannula with death of the animal was frequent. In those preparations in which the cannula maintained its patency, ascites did occur as a result of the selective obstruction of the outflow tract of the liver, the hepatic veins. Characteristically ascites was produced in four weeks, persisted four weeks, and gradually disappeared within a period of four weeks.

It is believed that the preceding observations, both clinical and experimental support the postulate of obstruction of the hepatic veins as the basic cause of ascites in cirrhosis of the liver.

Treatment

The treatment of ascites is primarily medical. Operation is advised only in those patients in whom the ascites is intractable. This is determined by the failure of the patient to respond to a carefully supervised medical regimen, continued for a period of two to three months, and preferably with the patient in the hospital. Ascites is believed indicative of a severe compromise in liver function. Accordingly, the performance of a major operation in its treatment is associated with a proportionately greater surgical risk. This concept is supported by a surgical mortality rate of 35 to 40 per cent. In comparison, portacaval shunts may be done for the treatment of portal hypertension and bleeding esophageal varices with a mortality rate that is less than 6 per cent.

Unfortunately, there is no ideal operation for the treatment of ascites. Ligation of the hepatic artery has generally proved unsatisfactory and its use is not recommended. I am in complete agreement with the statement: "The ligation of an artery to a part never does that part any good." Similarly, ileo-entectropy, suggested by Neumann,[9] has not proved consistently beneficial. In one patient, the author occluded totally the portal vein by ligature to decrease the inflow of blood into the liver. However, it had no effect on the formation of ascites.

The most logical operation and the one that is most commonly performed is a direct portacaval shunt. However, there is a controversy relative to whether the shunt should be side-to-side or end-to-side. Welch[12] is a staunch proponent of the side-to-side anastomosis. The preference for this type of shunt is based on the postulate that intractable ascites is caused by an outflow block of the liver. The performance of an end-to-side shunt in its treatment would necessitate total occlusion of the portal vein at the porta hepatis. Accordingly, with the resulting inflow and outflow liver blocks present, the

blood from the remaining inflow tract, the hepatic artery, would be entrapped within the liver and cause a congestive hepatomegaly. On this basis Welch[12] reasoned that a side-to-side shunt would be preferable since simultaneous decompression of the hepatic and mesenteric portal venous beds would be obtained and congestion within the liver prevented.

The proposal of Welch[12] was subsequently supported by McDermott[6] and by the hemodynamic studies, both experimental and clinical, of Warren and Muller.[10] In the study of Warren and Muller,[10] a small plastic catheter was inserted into the portal vein and the pressure (free portal pressure) recorded. The portal vein was then occluded proximal (mesenteric side) to the catheter and the pressure in the portal vein (occluded portal pressure) again recorded. In 3 of 7 patients so studied the occluded portal pressure was in excess of the free or unoccluded pressure. This was believed to indicate that in these 3 patients the portal vein had been converted from an inflow to an outflow tract and accordingly a side-to-side rather than an end-to-side shunt would be preferable. However, it was of interest to observe that such changes in the portal pressure occurred only in those patients in whom the indication for operation was bleeding. None of the patients with ascites had an elevation in the occluded portal pressure.

It is my own belief that to state the portal vein is converted to an outflow tract is a misnomer. During the past three years determinations of the free (unoccluded) and occluded portal pressures have been obtained in 10 patients who were operated upon for intractable ascites. In none was there an elevation in the occluded portal pressure. However, in my own experience, as well as that of others,[1, 2, 10] elevation of the occluded portal pressure in patients operated upon for bleeding secondary to portal hypertension is not uncommon. Accordingly, the a priori reasoning for the preference of a side-to-side shunt for patients with intractable ascites in whom the occluded portal pressures are not elevated, and an end-to-side shunt in patients with bleeding in whom the occluded portal pressures are frequently elevated, is believed illogical and based on a false premise.

In consideration of the preceding, what is the basis for the apparent paradox of the decrease in the occluded portal pressure in the ascitic patient and its frequent elevation in the patient with bleeding esophageal varices? It is believed that the answer to this query may be obtained from a study of the anatomic pathologic changes which occur in the digested liver specimens obtained from patients with intractable ascites and those with bleeding. As previously stated, in the digested liver specimens from patients with intractable ascites, there is an increase in the intrahepatic portal venous and hepatic arterial systems in contrast to their distinct decrease in patients in whom bleeding was the prime symptom. It is believed, also, that in patients with cirrhosis and bleeding, this lack of an adequate collateral vascular bed is the reason why an elevation in the occluded portal pressure is so frequently observed. However, in patients with intractable ascites, the absence of an elevation in the occluded portal pressure is thought due to the increase in portal venous collaterals through which the portal pressure is dissipated. It is believed that the values for the occluded portal pressures vary in an indirect ratio to the extent of the collateral venous circulation cephalad to the site of occlusion of the portal vein. This concept is supported by the recently reported experimental studies of Warren[11] which show a marked elevation of the occluded portal mesenteric pressure in the normal animal and its decrease corresponding to the extent in development of a collateral portal venous bed.

In studies of the hemodynamics of the portal as well as the systemic (varicose veins) venous systems, the fundamental fact that the venous return is toward the heart is frequently forgotten. It may be argued that this is basically true but there is a certain critical venous pressure beyond which a reversal of flow does of necessity occur. Admittedly there is a

relative stasis of flow dependent upon a decrease in the speed of flow. However, this is not a reversal of flow. This has been particularly well shown by the studies of Hunt[4] relative to the speed of flow in the portal vein of the normal patient and the patient with portal hypertension. In patients with severe portal hypertension the speed of venous flow was decreased from an average normal of 8.7 cm. per second to 4.4 cm. but never reversed. As the blockage to the portal flow increases, the inexorable return of the blood toward the heart is productive of a constant developing compensatory collateral venous circulation to maintain a return, albeit slowed, flow of blood to the heart.

Admittedly, the interposition of a large collateral conduit, a portacaval shunt, either side-to-side or end-to-side, will cause a proportionate increase in the speed of portal flow. Hunt has demonstrated a return of normal flow speeds in the portal vein following the establishment of portacaval shunts. In fact, the measurements of the speed of flow were used to determine the adequacy of the shunt. This criterion was preferred to the measurement of the pressures in the portal vein before and after the performance of the shunt. Hunt[4] used both flow rates and pressure determinations concomitantly, and in several instances when the post-shunt pressures were higher than the pre-shunt, the potency of the shunt, and the adequacy of the portal decompression were indicated by the increase in the speed of portal flow to the normal. It is obvious that if the pressure readings only were relied upon, one might falsely conclude that the increase in the post-shunt portal pressure was indicative of a retrograde flow.

What, then, is the preferred type of shunt for patients with intractable ascites; end-to-side or side-to-side? It is believed that the basic principle in surgical management is the functional adequacy of the shunt and not the particular method of anastomosis. In general, based on personal experience, an end-to-side shunt is preferred. Although the end-to-side and side-to-side ("universal") shunts have been equally successful in patients with portal hypertension and bleeding, this has not been true in patients with intractable ascites. In a series of 12 consecutive patients with intractable ascites, side-to-side shunts were done in 7. In 2 patients a direct anastomosis was not possible and the side-to-side shunts were effected by the interposition of autogenous vein (comman iliac and common femoral) grafts. In this group of 7 patients there were 6 postoperative deaths. The lone survivor, a 32-year old man, had a side-to-side shunt effected through the interposition of an autogenous vein (common iliac) graft. This patient subsequently died in hepatic coma four years after operation. There was no recurrence of the ascites despite the continual imbibing of alcohol Necropsy showed a widely patent and adequately functioning "H" graft between the portal vein and inferior vena cava.

Direct end-to-side shunts were performed in 5 patients, 3 of whom died postoperatively. In the total of 12 patients, 9 (75.0 per cent) died. It may be of particular interest to note that there were no deaths related to the technical details of the operation, such as shock, hemorrhage, or thrombotic occlusion of the shunt. All patients died in hepatic coma. Characteristically, with the exception of 2, the patients' progress after operation was most satisfactory until the sixth day. Usually at this time, but with delay in some patients up to the ninth day, episodic attacks of somnolence occurred. This was so uniformly constant that it was subsequently referred to as "the sixth to ninth day syndrome." Although the patients would show some individual variations in their response to treatment, each progressively worsened and death occurred between twelve and sixteen days postoperatively. It is believed also of interest to note that in almost all of the patients gastrointestinal bleeding of varying severity occurred nine to ten days after operation. It was observed in 8 of the 9 patients who died, and in 2 of the 3 patients who survived. None of the patients

had ever bled before the shunt was established. The cause for the high incidence of delayed postoperative bleeding is unknown but is believed to be related to the metabolic changes which occur concomitantly with progressive liver insufficiency. Necropsies were obtained in 6 of the 9 patients and in each of them the shunt was patent and adequate in size.

In general, the mortality rate following portacaval shunts in the treatment of patients with intractable ascites is high, ranging between 35 and 40 per cent. In the series presented, it was 75 per cent which is excessive and unacceptable. It is particularly disturbing when one considers that all of the patients met the accepted criteria which classified them as satisfactory surgical risks. Two other disturbing features were the delayed onset (six to nine days) of the symptoms of impending hepatic failure and the occurrence of delayed post-shunt bleeding in patients who had never bled previously.

The treatment of patients with ascites is basically medical and its presence is believed indicative of a severe compromise in liver function. Accordingly, the performance of a portacaval shunt, either side-to-side or, preferably, end-to-side, should be reserved for the treatment of patients with intractable ascites and on a highly selective basis. Nevertheless, the operation is associated with a high mortality rate despite the absence of the immediate postoperative complications of shock and hemorrhage, and the functional adequacy of the shunt.

Conclusions

In cirrhosis of the liver with intractable ascites there is an organic obliterative fibrosis of the outflow tract, the hepatic veins, and a compensatory increase in the collateral vascular beds of the inflow tracts, the hepatic artery and portal vein.

In cirrhosis of the liver with bleeding and without ascites, or with ascites of the reversible type, there is a symmetrical deficit in all of the intrahepatic vascular systems.

The concept of reversal of flow in the portal system is considered a misnomer. The increase or decrease in the portal occluded pressure is believed related to the extent of the collateral portal venous bed cephalad to the site of occlusion of the portal vein.

There is no constant relation between the measured portal venous pressures and the speed of portal flow.

The fundamental principle in the surgical treatment of portal hypertension with intractable ascites is the establishment of an adequate decompressive portacaval shunt whether it be end-to-side or side-to-side.

Gastrointestinal bleeding, nine to twelve days postoperatively is a common complication following a portacaval shunt in the treatment of intractable ascites.

The high operative mortality rate (35 to 40 per cent) in patients with intractable ascites, regardless of the type of shunt, is believed related to the severity of impairment in liver function.

References

1. Crane, C.: The Choice of Shunt Procedure for Cirrhotic Patients with Variceal Bleeding, Ascites and Hypersplenism. Surg., Gynec., & Obst., 115:12, 1962.

2. Gliedman, M. L., Sellers, R. D., Grant, R. N., Burkle, J. S., Leevy, C. M., and Vestal, B. L.: Observations on the Effect of Portacaval Anastomosis upon the Hemodynamics of the Liver. Surg., Gynec., & Obst., 105: 49, 1957.

3. Herrick, F. C.: An Experimental Study into the Cause of the Increased Portal Pressure in Portal Cirrhosis. J. Exp. M., 9:93, 1907.

4. Hunt, A. H.: Portal Hypertension. pp. 67-69. E. and S. Livingstone, Ltd., Edinburgh and London. 1958.

5. Kling, S. and Allen, P. B. R.: The Effects of Gradual Complete Occlusion of the Hepatic Veins. Surg. Forum, 9:550, 1958.

6. McDermott, W. V., Jr.: The Double Portacaval Shunt in the Treatment of Cirrhotic Ascites. Surg., Gynec., & Obst., 110:457, 1960.

7. McIndoe, A. H.: Vascular Lesions of Portal Cirrhosis. Arch. Path., Chic., 5:22, 1928.

8. Madden, J. L., Loré, J. M., Gerold, F. P., and Ravid, J. M.: The Pathogenesis of Ascites and a Consideration of its Treatment. Surg., Gynec., & Obst., 99: 385, 1954.

9. Neumann, C. G., Adie, G. C., and Hinton, J. W.: The Absorption of Ascite Fluid by Means of Ileo-entectropy in Patients with Advanced Cirrhosis. Ann. Surg., 146:700, 1957.

10. Warren, W. D., Muller, W. H., Jr.: A Clarification of Some Hemodynamic Changes in Cirrhosis and Their Surgical Significance. Ann. Surg. 150:413 (Sept.) 1959.

11. Warren, W. D., Restrepo, Jorge E.: Portal Circulation in Experimental Cirrhosis. Surg., Gynec., & Obst., 114:563 (May) 1962.

12. Welch, C. S., Welch, H. F., Carter, J. H.: The Treatment of Ascites by Side-to-Side Portacaval Shunt. Ann. Surg., 150:428 (Sept.) 1959.

DBI: A General Discussion and an Evaluation

- The use of this drug is pointed out in case reports.

SOL B. STERN, JR., M. D.*
New Orleans

DBI or phenethylbiguanidine is an oral hypoglycemic agent synthesized and developed in the research laboratories of the U. S. Vitamin and Pharmaceutical Company. It is an entirely new form of oral therapy for diabetes and is completely unrelated to the sulfonylureas both in chemical structure and in mode of action.

Mechanism of Action

The exact means by which DBI brings about the lowering of the blood sugar in certain diabetic patients is still a matter of conjecture and controversy.

Two points may be stated at this time: (1) its action is not dependent upon endogenous insulin as the drug is capable of lowering the blood sugar in alloxanized or depancreatized animals and (2) the drug probably has a direct cellular effect. There is no blood sugar lowering effect in normal subjects. In the diabetic patient, there is no evidence that inhibition of adrenal function, decreased gluconeogenesis or glucagon inactivation are contributing factors.[1]

According to Sadow,[2] DBI lowers the blood sugar by increasing directly (and competitively with insulin regardless of source) the uptake of glucose and its glycolysis of glucose-6-phosphate in many cells, probably in muscle and possibly in the liver and fat pad. This follows the Embden-Meyerhof pathway of glycolysis (anaerobic glycolysis). Since DBI does not activate the Krebs cycle, the disposal of the intermediary metabolites by this pathway following DBI is much slower and there is apparently a transient pile-up of pyruvate and lactate.

Steiner and Williams[3] state that the principal enzymatic site of action of DBI appears to be on certain enzyme systems of the mitochondria which are concerned with Krebs cycle oxidations. Exact site of the inhibition within the mitochondria is not certain and may actually involve several enzyme complexes. Cytochrome oxidase activity is certainly significantly inhibited in vitro. Leslie et al[4] in their in vitro studies also demonstrated the ability of DBI to inhibit electron transport and enzyme oxidation at the succinic dehydrogenase and/or cytochrome oxidase level in muscle, adipose tissue and liver.

There is also far from general agreement as to amount of liver glycogen present after the administration of DBI.[3, 5]

In summary, then, it can be stated that phenformin is capable of lowering the blood sugar in certain diabetics by increasing glycolysis along the anerobic pathway. This may be due to an inhibition of the cellular oxidative reactions, possibly those of the mitochondria which are concerned with Krebs cycle oxidations. An accumulation of intermediate metabolites of the Krebs cycle—a decrease in the rate of disappearance of pyruvate, lactate and citrate, and a decrease in the oxidation of glucose, citrate and succinate—occurs.

Time Activity

According to Sadow et al,[2] measurable changes occur in the blood sugar by the second or third hour, maximum change between the fourth and sixth hour and disappearance of the effect by the eighth hour.

The time release capsule, DBI T-D, lasts up to fourteen hours. The obvious advantages of DBI T-D would be ease of administration as well as the slow release of the drug over an eight hour period preventing "peaking" concentration of the drug such as occurs with the administration of the tablets, thus reducing greatly

* From the Department of Medicine and The Diabetic Clinic, Touro Infirmary, New Orleans, La.

the incidence of certain side-effects which are on a central basis rather than on the basis of local irritation.

Side Effects

The appearance of ketonuria and acidosis in the presence of normal or slightly elevated blood sugars has been a cause of some concern. In a series of 117 cases reported by Walker et al,[6, 7] there was a total of 13 cases in which the alkali reserve was below 20m.Eq liter. The severe fall in alkali reserve was virtually confined to juvenile diabetics although ketonuria appeared in all types. It was also observed that there was an association between the appearance of the acidosis and the amount of exercise taken. Follow-up studies using a standard amount of exercise related to age and weight were given (Master and Oppenheimer). The unstable diabetic on DBI showed a precipitous fall in alkali reserve immediately after exercise and greater yet at fifteen minutes and well as high fasting total blood hydrazone and lactic acid which rose strikingly after exercise. These changes are much in excess of those observed in insulin—controlled diabetics and in stable cases on DBI.

Sadow[2] states that in the acidosis-prone or purely insulin-dependent patient, DBI can lower the blood sugar in the absence of the hormone but it can usually not prevent the ultimate development of ketosis or acidosis since insulin is necessary for hexose monophosphate shunt glycolysis by which the reduced enzyme cofactor (TPNH) is formed. Without this cofactor, fat synthesis is impaired and ketone body formation cannot be prevented. Thus these patients absolutely require exogenous insulin which, as stressed by Marble and others, may be supplemented by phenformin. This acidosis must also be due, at least in part, to the raised blood lactate and pyruvate levels.

That this condition should be appreciated further is emphasized by the fact that Walker, Linton and Thompson[7] reported 2 cases with severe acidosis with blood sugars which were not markedly elevated. Case No. 1 had a blood sugar level of 208 mgm./100 ml. and an alkali reserve of 4.9m. Eq/1. In Case No. 2, the respective values were 280 mgm./100 ml. and 3.1m. Eq/1. The latter patient died despite "strenuous empirical measures". In neither case was there any obvious predisposing factor, and, in both cases, the biochemical upset was rapid in onset and severe in degree. That such a severe disturbance does not occur in the stable diabetic is probably accounted for to some extent by the presence of endogenous insulin.

Tranquada et al[8] reported severe fatal metabolic acidosis associated with extreme elevations in serum lactate, without hyperglycemia or ketosis, in three diabetic patients treated with DBI, and Bervier, Springate and Miller[9] reported two patients receiving phenformin who died in profound acidosis with minimal elevation of the serum ketones, markedly elevated blood lactate levels and hypotension. Gottlieb et al[10] reported another case of severe metabolic acidosis in the absence of ketonuria in a patient receiving DBI.

In line with these findings, it is important to cite the works of Huckabee[10, 11] who reported 9 cases presenting a syndrome of marked hyperpnea, tachypnea and fatigue progressing to stupor and finally to death in periods ranging from a few hours to twelve days. All patients had low serum bicarbonate, sometimes extraordinarily low, and abnormally acid pH of the blood and an extreme elevation of lactate. Interestingly, there were no cases of diabetes or renal failure and no history of exposure to toxic drugs. He stated that the biochemical cause of the accumulation of lactic acid appeared to be widespread tissue hypoxia of unknown etiology. Thus it is possible that those patients receiving DBI and developing lactic acidosis might be cases of the idiopathic type described by Huckabee rather than cases which resulted from a direct, and possibly toxic, DBI effect. Certainly both factors should be borne in mind and further clarification regarding the etiology of lactic acidosis both in those patients receiving DBI as

well as those patients not receiving the drug must be forthcoming.

Another abnormality is ketosis with normoglycemia seen in diabetics of all types. It has been suggested that this might represent a starvation ketosis as this usually responds to an increase in carbohydrate in the diet or decreasing the dosage of DBI or both. Possibly this is the result of decreased stores of liver glycogen. Williams[3] states that possibly DBI does not duplicate the anti-ketogenic effect of insulin. He also emphasizes that this effect can and does occur in the presence of substantial doses of insulin which suggests that the biochemical disturbances are not due simply to insulin lack but may in fact constitute a direct toxic effect of DBI.

Gastrointestinal side-effects are seen with a varying degree of frequency. They are certainly not serious and have been obviated to some extent by the introduction of the time-release capsules, DBI T-D,

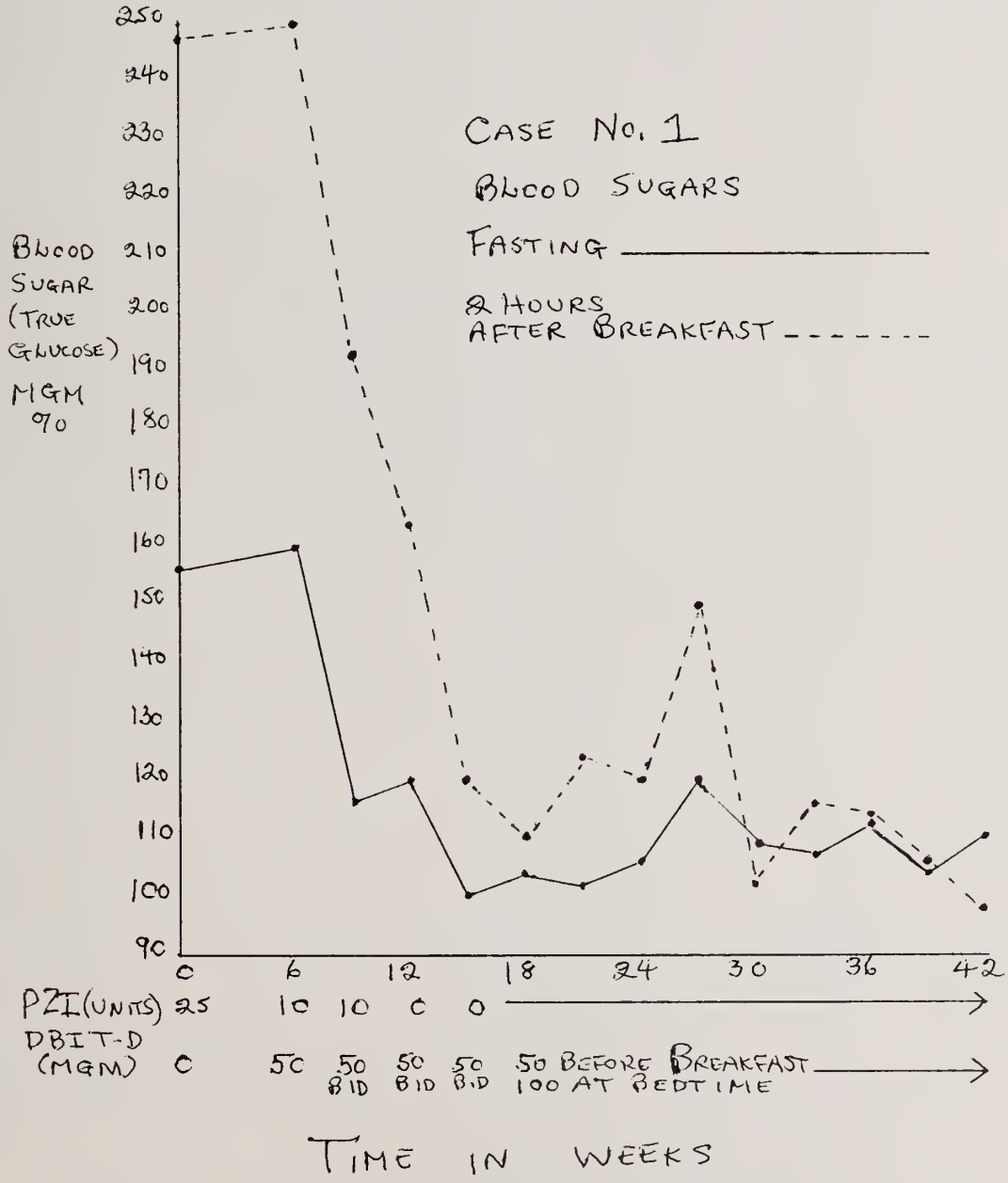


Figure 1

which, as stated previously, prevent "peaking" of concentration of the drug. Extreme weakness and lassitude are seen fairly frequently and the patient will occasionally refuse to continue with the drug because of the severity of the symptoms.

Indications for DBI

(1). **Adult—Stable, Late-onset, Maturity-type Diabetics.** Many of these patients can be controlled with DBI alone. Statistics vary considerably on the effectiveness of the drug. Sadow[2] states that long term therapy is successful in at least 8 out of every 10 such patients and that there is a phenomenally low rate of secondary failures (0.2%). Generally speaking, however, I see no advantage and possibly some disadvantage of DBI over the sulfonylureas which I feel should be tried first.

Case No. 1: H.F. This patient was a 71 year old diabetic whose onset of the disease occurred at age of 44. She had been on P21, 25 units, for the past seven years but control had not been good. Her fasting blood sugars (true) ranged from 123 to 240 mgm. % with an average of 160 mgm. % and her two hour postprandial sugars ranged from 180 to 312 mgm. % with an average of 250 mgm. %. As may be seen from Figure No. 1, insulin dosage was gradually decreased while that of DBI T-D was increased and, as may be seen, she is now ideally controlled on DBI T-D 50

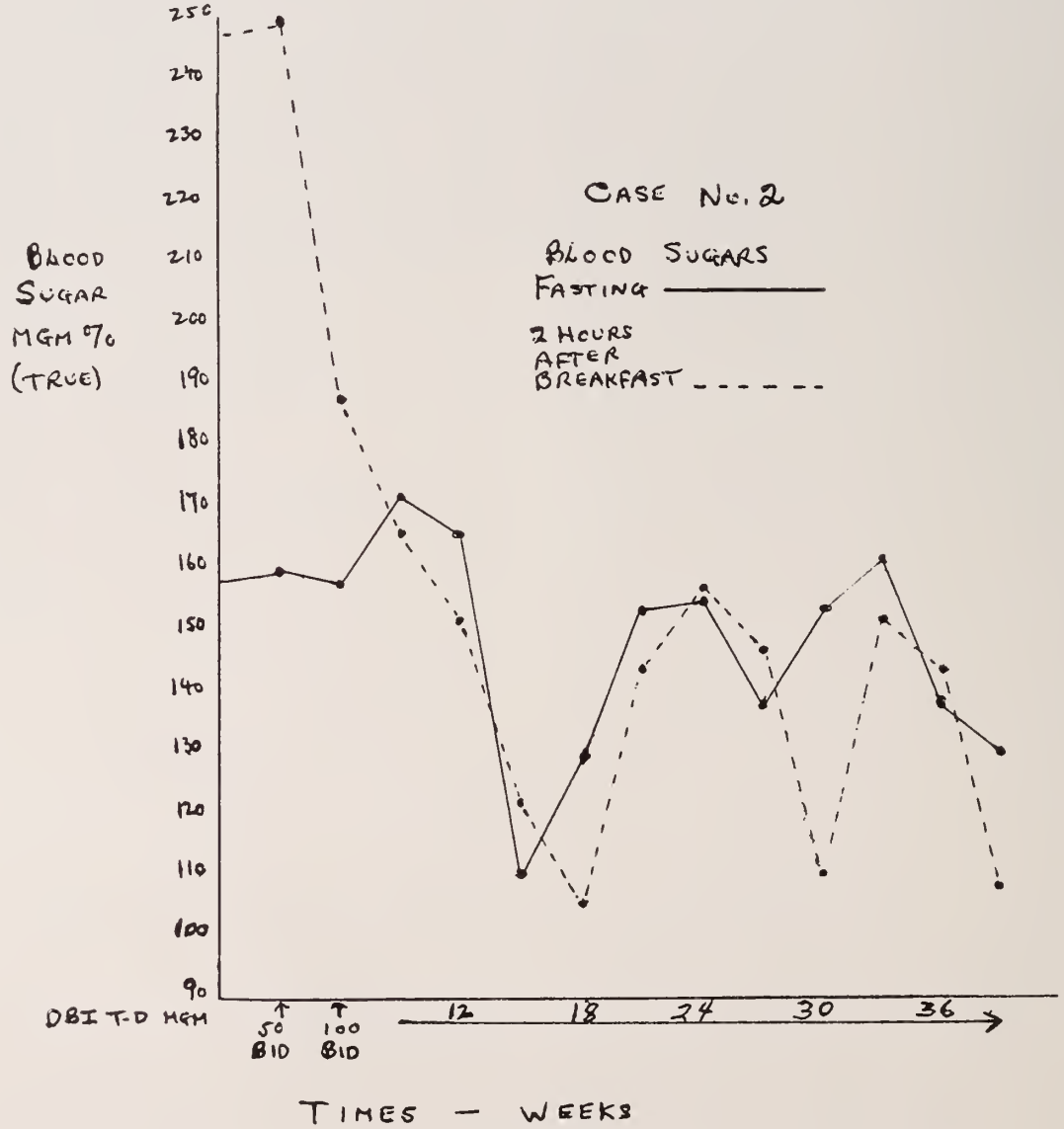


Figure 2

mgm. before breakfast and 100 mgm. at bedtime.

(2). **Therapeutic failures, primary or secondary, with sulfonylureas:** Again, there is considerable variation in the literature regarding percentage of effectiveness. Moss states that 55 per cent of cases of secondary failures with Tolbutamide may be controlled with DBI. This is probably a very high figure particularly when compared to personal experience.

Case No. 2: E.G., a 59 year old diabetic of eleven years duration who had been controlled on diet for a little more than two years. At that time, control became poor and patient was given Orinase, 2000 mgm. daily, but control was poor and this patient was presumed to be a primary Orinase failure. As may be seen in Figure No. 2, control has improved markedly on DBI T-D, 100 mgm. twice daily.

(3). **Used with insulin in the extremely brittle or labile diabetic to produce a smoother type of diabetic control:** This would seem to be the most important single contribution of DBI. Remember, however, that insulin is the treatment of choice in these patients and that it may be supplemented with phenformin; these patients absolutely require insulin.[14] These are the patients who must be the most carefully watched from the standpoint of acidosis, either diabetic, lactic acidosis or starvation ketosis.

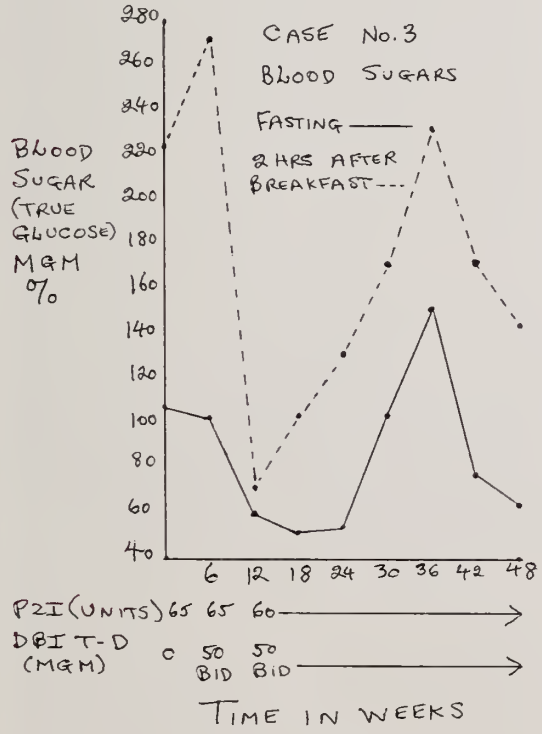


Figure 3

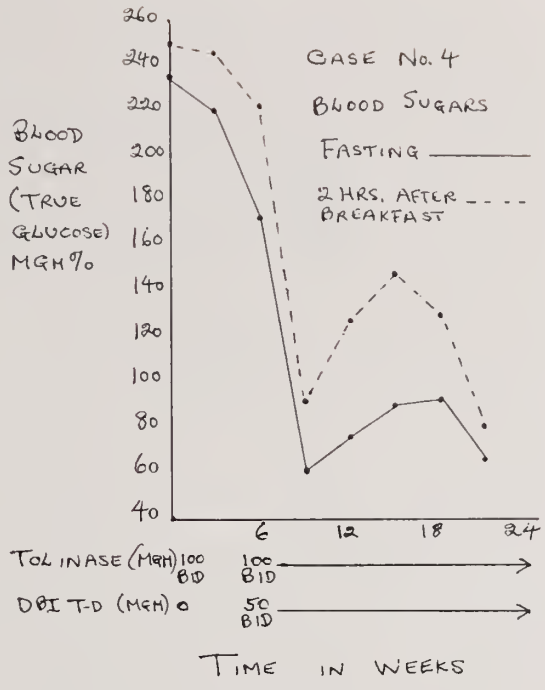


Figure 4

Case No. 3: G.G., a brittle diabetic of fifteen years duration who, at the age of 57, was still a problem from the standpoint of control. Fasting blood sugars (true) over a period of years ranged from 80 to 280 mgm. % and two-hour postprandial sugars varied from 159 to 324 mgm. %. As may be seen in Figure No. 3, control on the whole was tremendously improved and the patient was maintained on PZ1, 60 units, now as against 65 units previously and she required only 50 mgm. of DBI T-D twice daily to achieve this effect.

(4). **DBI combined with sulfonylurea therapy:** Many patients who cannot be adequately controlled with DBI alone or with the sulfonylureas alone may be satisfactorily controlled with combined therapy.[15, 16]

Case No. 4: M.G., a 66 year old diabetic of twenty years duration who required PZ1, 10 units daily, for control. Her control with Orinase alone was poor as was her control with Tolinase® alone. Resultant control has been excellent (Figure No. 4) since the addition of DBI T-D, 50 mgm. twice daily.

Summary

A new and valuable addition to the therapeutic armentarium in the control of diabetes mellitus has been described.

From our personal experience, it would seem that the chief value of this drug is its use in supplementing insulin in the regulation of the brittle diabetic. Another important use would be the combining of DBI with a sulfonylurea drug in which neither drug alone would produce ideal control. Thus many more patients could be regulated with oral medication. I would feel that the other indications for the drug would be of less importance.

It should also be further stressed that certain serious consequences may ensue in patients receiving DBI, particularly in those labile patients receiving both DBI and insulin. Careful follow-up of these patients is mandatory.

Acknowledgment: I am greatly indebted to F. Gilbert McMahon, M. D. of the Upjohn Company for the supply of Tolinase®, and to Harvey Sadow, Ph. D. of the U. S. Vitamin and Pharmaceutical Corporation for the DBI T-D used in this study.

References

1. Fajans, S., Moorehouse, J. A., Doorenbos, H., Louis, L. H. and Conn, J. J.: Metabolic Effects of Phenethylformandinlyiminourea (DBI) in Normal Subjects and in Diabetic Patients. Clinical Research 6:252, 1958.

2. Sadow, H. S., Baxter, N. and Teller, F. F.: Phenformin Hydrochloride, Maryland State Med. Jour. 11:76, 1962.

3. Steiner, D. F. and Williams, R. H.: Editorial, Diabetes 8:154, 1959.

4. Leslie, Duncan, J. P. and Baird, J. D.; Compounds Administered Orally in the Treatment of Diabetes Mellitus, Phar. Rev. 125:91, 1960.

5. Butterfield, W. J. H. and Wichelow, M. J.: The Hypoglycemic Action of Phenformin, Diabetes 11:271, 1962.

6. Walker, R. J., Linton, A. L. and Thompson, W. S. T.: Mode of Action of Side Effects of Phenformin HCL, Brit. Med. J. 2:1567, 1960.

7. Walker, R. J. and Hannah, R.: Experiences with Phenformin, Diabetes 10:275, 1961.

8. Tranquada, R. E., Bernstein, S. and Martin, H. F.: Irreversible Lactic-Acidosis Associated with Phenformin Therapy, J.A.M.A. 184:37, 1963.

9. Gottleib, A., Duberstein, J., and Geller, A.; Phenformin Acidosis, New England J. M. 16:806, 1962.

10. Huckabee, W. E.: Abnormal Resting Blood Lactate, Am. J. Med. 30:832, 1961.

11. Huckabee, W. E.: Lactic Acidosis, Am. J. Med. 30:840, 1961.

12. Moss, J. M., DeLawter, D. E., Tyroler, S., and Canary: J.A.M.A. 171:1786, 1959.

13. Marble, A.: Editorial, Diabetes, 10:321, 1961.

14. Beaser, S. B.: Orally Given Combination of Drugs in Diabetes Mellitus Therapy, J.A.M.A. 174:2137, 1960.

15. Unger, R. H., Madison, L. L. and Carter, N. W.: Tolbutamide—Phenformin in Ketosis—Resistant Patients, J.A.M.A. 174:2132, 1960.

A Senator's Opinion About Drug Hearings

I am sure you expect me to say something about the drug bill to which the bureaucracy of the United States Congress has assigned the unglamorous designation, S. 1552. You know, despite all the fuss and feathers, the **bill** is really not so important. After all, thousands of bills are introduced in the Congress each session. What **is** important about this bill is the fact that it was the vehicle for one of the longest, dreariest, most biased, most unfair, most cynical—I could go on—series of hearings which ever disgraced the United States Senate.—U. S. Senator Roman L. Hruska to Fordham University College of Pharmacy, April 29, 1962.

Carcinoma of the Cervical Esophagus and Hypopharynx: Case Report and Method of Management

• The following case is presented and illustrates a method of management utilizing enblock excision of the cervical esophagus and adjacent structures, and immediate restoration of continuity of the alimentary canal.

CHARLES W. PEARCE, M. D.*
ROBERT J. SCHRAMEL, M. D.
New Orleans

CARCINOMA of the cervical esophagus and hypopharynx presents a difficult problem in management. Irradiation therapy may provide significant palliation in these patients but is rarely curative.[2] In contrast surgical treatment provides some hope for cure. Utilizing the Wookey operation, Mustard[1] has reported a five-year survival rate of 24 per cent among 44 patients undergoing resection of the cervical esophagus or larynx and pharyngoesophagus for carcinoma at the Toronto General Hospital from 1934 to 1960. Included in this group were patients operated upon by Wookey himself. Similar results have been reported by Owen[3] and by Raven.[4]

Despite these relatively favorable results in terms of curability, the Wookey operation has not been enthusiastically applied by others and has not been looked upon as satisfactory. A second stage of the operation is required after six to twelve weeks and stricture formation has been distressingly frequent. Further, there is a tendency to limit the extent of resection of cervical esophagus and hypopharynx in order that the skin flap provided by the Wookey procedure might be of sufficient width to bridge the defect.

Surgical treatment involves two major considerations. Extirpation of the lesion often requires concomitant sacrifice of the larynx and upper trachea and part or all of the thyroid and parathyroid glands because these structures may be involved by direct extension. In addition, metastases to cervical lymph nodes may necessitate their removal in continuity with the primary lesion. Secondly, restoration of continuity of the alimentary canal at the cervical level has not been easily accomplished.

Case Report

A colored man, 44 years of age, noted difficulty swallowing solid foods and subsequently liquids beginning in April 1960. In May of that year he was first admitted to Charity Hospital. Esophagoscopy revealed a granular constricting lesion at the junction of the cervical esophagus and hypopharynx. Biopsy of the lesion demonstrated epidermoid carcinoma. Although direct extension of the lesion into the larynx was not evident, the right vocal cord was paralyzed.

The patient received irradiation therapy over a period of six weeks, during which an estimated tumor dose of 5,000 roentgen units was given. Toward the end of this period he noted significant improvement in swallowing liquids and soft solids. However, two months after completion of treatment dysphagia reappeared and rapidly progressed. In October 1960, he was again admitted to Charity Hospital.

Examination revealed evidence of marked weight loss. Fullness and slight tenderness of the deeper structures of the anterior midportion of the neck was noted. The patient was able to speak with only a whisper. There were no palpable lymph nodes in the neck on either side. Mild irradiation effects were apparent in the skin of the anterior cervical area. The liver was not palpable and was not enlarged to percussion.

Blood count revealed only a mild hypochromic anemia. Urinalysis demonstrated no abnormali-

* Established Investigator, American Heart Association.

From the Department of Surgery, Tulane University School of Medicine and Charity Hospital, New Orleans, Louisiana.

ties. The serum alkaline phosphatose was 2.5 Bodansky units per 100 ml. Roentgenograms of the chest demonstrated neither pulmonary abnormalities nor mediastinal enlargement. A skeletal survey revealed no osteolytic changes.

During endoscopic examination a granular constricting lesion was visible in the lower portion of the hypopharynx with direct extension into the posterior wall of the larynx. Complete paralysis of the right vocal cord and incomplete paralysis of the left cord was evident. The esophagoscope could not be passed beyond the hypopharynx. Bronchoscopy revealed no other abnormalities. An esophogram demonstrated severe narrowing and distortion of the hypopharynx and cervical esophagus to a point about 2 cm. above the thoracic inlet. (Figure 1). The esophagus distal to this point appeared normal.

Because of the fact that the process was confined to the anterior portion of the neck and no sign of distant metastasis was evident, decision was made to surgically excise the entire cervical esophagus and adjacent structures enblock. Prior to operation mechanical and antibiotic bowel preparation was carried out.

Operation was performed November 21, 1960. An oblique incision was made along the anterior border of the right sternocleidomastoid muscle and carried downward over the manubrium. The



Figure 1. Esophagram, one month prior to operation, demonstrating severe narrowing and distortion of the hypopharynx and cervical esophagus due to epidermoid carcinoma.

sternohyoid and sternothyroid muscles were divided transversely immediately above the sternum. The omohyoid muscle on each side was divided deep to the sternocleidomastoid muscle. Palpation revealed that by direct extension the tumor involved the lower 2 cm. of the hypopharynx, the cervical esophagus down to a point 1 cm. above the thoracic inlet, the entire posterior wall of the larynx, the posterior wall of the upper 3 cm. of the trachea, the posterior aspect of both the right and left lobes of the thyroid and presumably the parathyroid glands. No enlarged lymph nodes were detected along the internal jugular vein on either side. The distal portion of the trachea was mobilized and transected at the level of the suprasternal notch. A sterile endotracheal tube was immediately placed into the distal trachea and attached appropriately for continuation of anesthesia. The upper four centimeters of thoracic esophagus was mobilized and divided at a point 2 cm. below the thoracic inlet. The distal end was inverted, closed with interrupted silk sutures, and allowed to retract into the mediastinum. The proximal transected end was closed similarly. Dissection was then carried upward along the prevertebral fascia, which was excised in areas particularly adherent to the posterior wall of the esophagus. The areolar and lymphatic tissue adjacent to the internal jugular vein and carotid sheath on each side was reflected upward with the specimen. Each recurrent laryngeal nerve was divided distally. The thyroid gland was similarly reflected upward with the specimen, and no attempt was made to identify or preserve the parathyroid glands. The sternohyoid muscle was next divided adjacent to the hyoid bone and the hypopharynx transected above the level of the epiglottes. The specimen was removed and consisted of the hypopharynx, the entire cervical esophagus, a small portion of the upper thoracic esophagus, larynx, upper trachea, thyroid and parathyroid glands, recurrent laryngeal nerves, and the adjacent areolar and lymphatic tissue.

The operative field was covered temporarily with moist pads and a midline abdominal incision extended from the xiphoid process to below the umbilicus. The liver was not enlarged and contained no masses or nodules suggestive of metastatic tumor. Likewise there was no ascites and no peritoneal implants or enlargement of lymph nodes about the left gastric artery or celiac axis. Neither adrenal gland contained palpable masses. The lateral peritoneal reflection of the cecum and ascending colon was incised and the mesentery mobilized retroperitoneally. The ileocolic artery and vein were next divided proximal to the origin of the right colic vessels and the ileum transected 15 cm. proximal to the ileocecal valve. The appendix was removed. The trans-

verse colon was divided 10 cm. to the left of the middle colic artery and vein. By blunt dissection a retrosternal tunnel was created. The distal ileum followed by the cecum and the ascending colon was then placed posterior to the stomach and passed upwards in the retrosternal space to the cervical area. It was evident at this time that the cecum would not reach the pharynx to permit anastomosis without tension. Therefore the distal ileum was anastomosed to the pharynx side to end utilizing two layers of interrupted silk sutures. End to side cologastrostomy and end to end ileotransverse colostomy were next accomplished. A gastrostomy tube had been placed several months previously and was left in place. Permanent tracheostomy was established in the suprasternal notch just left of the midline. The cervical and abdominal incisions were closed with interrupted silk sutures. The patient's condition throughout operation was satisfactory.

Microscopic examination of the specimen demonstrated grade IV epidermoid carcinoma of the cervical esophagus with invasion of the hypopharynx, the larynx, thyroid and parathyroid glands.

Oral liquids were begun on the fifth day after operation and the patient advanced to a six feeding gastric diet by the 12th postoperative day. Circumoral tingling and numbness and a positive Chvostek sign appeared on the third day after operation. The serum calcium at this time was 7.2 mg. per cent. Small amounts of calcium gluconate were added to his infusions for the next three days and the patient then placed on 200,000 units of vitamin D daily by mouth. Thereafter signs of parathyroid deficiency did not appear. On the tenth day after operation the patient was begun on one and one half grains of thyroid extract per day and dosage later increased to three grains. The patient was discharged on the 14th postoperative day.



Figure A

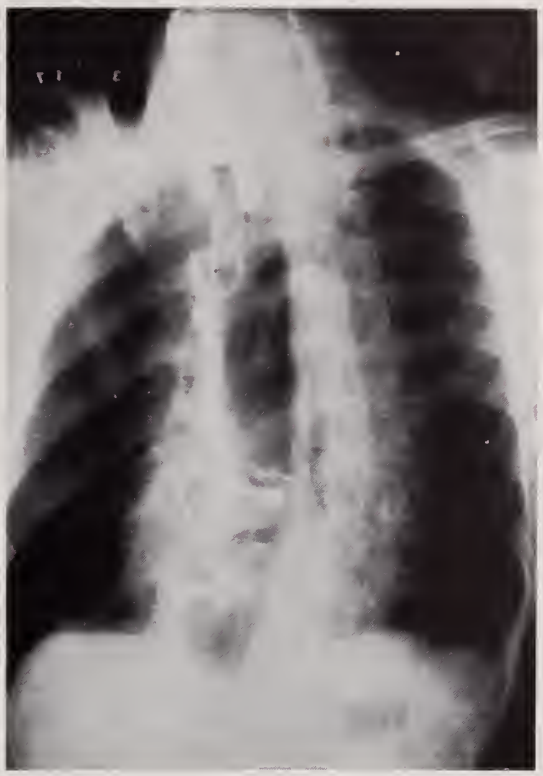


Figure 2. Roentgen contrast study, three months after operation, demonstrates (a) side to end ileopharyngostomy with slight narrowing at anastomosis and (b) prompt and unobstructed passage of barium through the interposed colon into the stomach and small intestine.

Over the succeeding three months the patient gained 45 pounds, while continuing to take thyroid extract and concentrated vitamin D orally. At this time mild dysphagia developed for which the patient was readmitted. Endoscopy revealed reddening and slight narrowing at the pharyngoileostomy, particularly about several silk sutures which were removed. Biopsy demonstrated only chronic inflammation. Roentgenographic study revealed slight narrowing at the pharyngeal anastomosis. (Figure 2a). Prompt passage of ingested barium into the stomach and small intestine was evident. (Figure 2b). Dysphagia cleared and the patient was discharged. He had continued to do well when last seen 15 months after operation.

Discussion

Although follow-up of this patient is too short to permit any statement regarding cure, he has at least attained striking relief of dysphagia and gained his sense of strength and well being. Whereas sacrifice of the larynx was necessary, its function was severely limited due to invasion by the neoplasm prior to operation.

Not all patients with carcinoma of the cervical esophagus will be suitable candidates for this method of management either because of distant metastases or serious disease in other organ systems which would make the risk of operation prohibitive. However, in the hands of surgeons experienced in the performance of transposition of the colon for esophageal bypass or substitution, an increasingly greater number of patients should prove to be suitable candidates for this operation. In contrast to the Wookey procedure, immediate restoration of continuity of the alimentary tract is achieved as illustrated in Figure 3. Thus, there is also some justification for its use as a palliative measure in certain patients, especially when irradiation therapy has not given significant or sustained relief of dysphagia.

In addition, the operation should prove particularly applicable in those patients who have previously undergone irradiation therapy. In such instances, the deleterious effects of irradiation on the skin of the neck prevents or makes hazardous its use for esophageal reconstruction in the Wookey procedure.

In performance of retrosternal transposition of the colon for esophageal bypass, we consider it desirable to divide the ileum some 10 or 15 cm. proximal to the ileocecal valve and preserve the ileocolic vessels. The viability of the ileum has been excellent in our experience and provides additional length for performance of the cervical anastomosis without tension. This is especially important when one contemplates anastomosis at a level as high as the hypopharynx. We have used the terminal ileum in this fashion for anastomosis to the lateral wall of the oropharynx

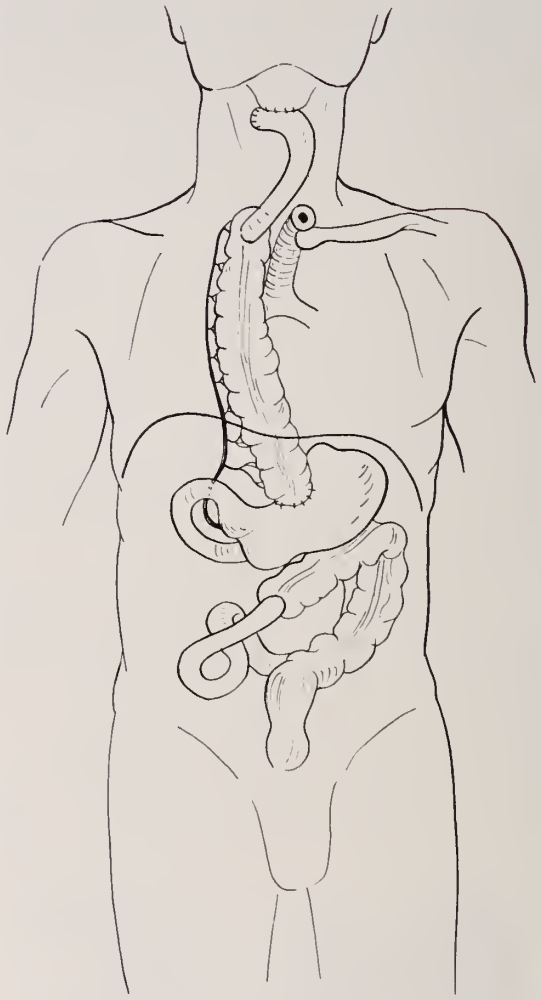


Figure 3. Method utilized for immediate restoration of upper gastrointestinal continuity after resection of cervical esophagus and hypopharynx. The right colon is placed in a retrosternal tunnel created by blunt dissection, and the ileum anastomosed side to end to pharynx. Anastomosis of the distal end of the interposed colon to the stomach, and end to end ileotransverse colostomy completes the procedure.

for relief of stricture of the hypopharynx and cervical esophagus resulting from ingestion of lye. In addition, we often have found it advantageous to use the side, rather than the end of the ileum for anastomosis to the cervical esophagus or pharynx. This provides a wider anastomotic opening and may be important in the prevention of stricture and leakage at this site. Such complications not infrequently follow end to end esophagoileostomy.

Summary

A patient with carcinoma of the cervical esophagus was treated by irradiation therapy with transient relief of dysphagia. By direct extension the lesion involved the hypopharynx, larynx, upper trachea, thyroid and parathyroid glands. Subsequently enblock resection of these structures was performed and continuity of the alimentary tract achieved concomitantly by retrosternal transposition of the right colon and terminal ileum with pharyngoileostomy. The patient has done extremely well in the fifteen months since operation.

Management of carcinoma of the cervical esophagus in this manner is proposed in suitable cases since it provides immediate relief of dysphagia while avoiding the necessity for staged operative procedures, and gives the surgeon greater freedom in the excision of adjacent structures which may be involved. Furthermore, particular application of this approach may be found in patients in whom previous irradiation has made the cervical skin unsuitable for esophageal reconstruction in the Wookey procedure.

References

1. Mustard, R. A.: The use of the Wookey operation for carcinoma of the hypopharynx and cervical esophagus. Surg. Gyn. and Obs. 111:577, 1960.

2. Mustard, R. A., and Ibberson, O.: Carcinoma of the esophagus, a review of 381 cases admitted to the Toronto General Hospital 1937-1953 inclusive. Ann. Surg. 144:927, 1956.

3. Owen, R. D.: The problem of hypopharyngeal carcinoma. Proc. R. Soc. M., Lond. 43:157, 1950.

4. Raven, R. W.: Cancer of the pharynx, larynx and oesophagus and its surgical treatment. London: Butterworth and Co., Ltd., 1958.

New Drug Advertisements

Will this (new drug) law and the regulations hurt journal advertising? It is difficult at this point for me to give a categorical answer to this question. Certainly, we are not going to stop advertising. The requirement that we give a brief summary relating to side effects, contraindications and effectiveness will not deter manufacturers from advertising provided the regulations are reasonable. However, there is one respect in which I am afraid all advertising will be affected. Our largest advertising budgets are devoted to the promotion of new products. In my opinion, present administrative procedures and the requirements of the new law will indisputably slow down the development and marketing of new drugs, which means that each year we will have fewer new drugs to advertise. However, as an offset against this, having invested more in the development of a new drug, we will be willing also to invest more in its promotion because we can't take a chance of faltering in this final payoff step. And, it is entirely possible that the net effect on journal advertising will be unchanged in the long run.—Theodore G. Klumpp, M. D., President, Winthrop Laboratories, in **Rocky Mountain Medical Journal**, Dec. 1962.

Biopsy of the Prostate*

• The types of neoplasms and the procedures for diagnosis.

W. L. GEISSLER, M. D.
J. H. CAMPBELL, M. D.
E. C. ST. MARTIN, M. D.
C. M. PASQUIER, JR., M. D.
Shreveport

CARCINOMA of the prostate occurs in 14 to 20 per cent of males fifty years of age. The incidence increases progressively and in the ninth decade approaches 50 per cent.[1] Prostatic cancers are curable by surgery for a certain length of time after they first develop, but only a small proportion, approximately 5 per cent are discovered early enough for curative radical prostatectomy.[2] This is due to the fact that early prostatic cancer produces no symptoms. The person who is in a position to detect early carcinoma of the prostate is the physician who does annual or routine physical examinations. It is on routine rectal examination that the asymptomatic changes of early carcinoma of the prostate may be detected. These changes may present as nodules, alterations in density, or asymmetry of the prostate.

Kimbrough[3] demonstrated the importance of routine rectal examination in men over forty years of age. In his series of patients with carcinomas of the prostate at Walter Reed Hospital, 50 per cent were found to be operable. Although rectal palpation is of the utmost importance in detection of early carcinoma of the prostate it is not pathognomonic of this condition. Generally the accuracy of rectal examination of the prostate for carcinoma is approximately 80 per cent, but this is in the classically advanced stony-hard lesion. In the suspicious, equivocal lesions of the prostate, this only approaches 50 per cent.[4, 5] Granuloma, chronic, non-specific infection, calculi, tuberculosis, healed infarcts and benign leiomyomas of the prostate may produce changes similar to carcinoma.[6] Typical rectal changes of carcinoma may be substantiated by an elevated serum acid phosphatase or typical bone lesions. Histological confirmation of suspicious lesions of the prostate is imperative prior to any radical surgery. It is advisable from a medical-legal aspect prior to palliative orchidectomy.

The cytological study of prostatic secretion has been used as a means of screening patients for carcinoma of the prostate. This is entirely inadequate for a diagnosis of early carcinoma.[7, 8]

The methods available for obtaining adequate tissue from the prostate for microscopic study are: 1. Transurethral biopsy. 2. Open perineal biopsy. 3. Open transrectal biopsy. 4. Perineal needle biopsy. 5. Transrectal needle biopsy.

Transurethral Biopsy

The fact that the majority of cancers originate in the posterior portion of the prostate[6] makes this procedure unsatisfactory in obtaining suitable tissue for study in early cases of carcinoma. Malignant lesions may be missed even if the resections are carried down to the true capsule of the prostate. Transurethral resection of the prostate to confirm the diagnosis of carcinoma should be limited to advanced cases with obstructive symptoms. In these cases, it is advisable that the tissue removed adjacent to the posterior capsule be kept separate from the remaining resection. This gives the pathologist a better opportunity to make a positive diagnosis on frozen section and orchidectomy may be carried out under the same anesthesia if so desired.

* Presented at the Eighty-second Annual Meeting of the Louisiana State Medical Society, May 9, 1962, Monroe.

Open Perineal Biopsy

If one suspects early cancer of the prostate open perineal biopsy with frozen section followed by radical perineal prostatectomy in the opinion of most urologists[4, 7, 9, 10] is still the procedure of choice. If it is impossible for the pathologist to make a positive diagnosis on frozen section, the biopsy sites in the prostate and the perineal wound are closed. Permanent H and E sections of the tissue are made. If a diagnosis of cancer is made curative radical retropubic prostatectomy may be carried out. This procedure is facilitated as a result of the previous perineal dissection. A distinct advantage to open perineal exposure is that it affords the operator important information concerning fixation of the prostate. This knowledge will influence any decision regarding the feasibility of radical surgery. There are some disadvantages to open perineal biopsy which should be considered. It is a major surgical procedure requiring hospitalization and anesthetic, and may result in some degree of morbidity. The incidence of impotency following perineal surgery has been reported to be as high as 20 to 30 per cent.[11, 12] For this reason, many urologists are reluctant to subject a younger individual to an open perineal procedure on the basis of questionable rectal findings. Because of this hesitancy there may be a tendency to follow small equivocal lesions until they become more prominent; to observe the patient's response to a course of estrogen therapy; or to follow a patient with repeated prostatic massages,[13] and smears for malignant cells. Small lesions of the prostate noted on rectal examination might be difficult to identify even at the time of open surgery. Carcinoma may be found in a biopsy taken from a clinically unsuspected area of the prostate, while tissue removed from a suspicious area may be devoid of tumor. Adequate biopsies should be taken from both lobes of the prostate at the time of perineal biopsy even if the opposite lobe feels benign.

Open Transrectal Biopsy

This is an acceptable, but not very popular method of obtaining tissue for histological study. This procedure also requires a general or spinal anesthetic. A small incision is made into the rectal wall over the indurated area in the prostate. From this site an adequate portion of tissue is obtained with biopsy forceps. Pituitary type forceps have proved satisfactory for this purpose. Because of the possibility of recto-vesical fistulas and increased difficulty of dissection when performing radical prostatectomy some authors have advised against the use of this method prior to any contemplated radical prostatectomy.[14-16]

Needle Biopsy of Prostate

Needle biopsy of the prostate has had a periodic rebirth of enthusiasm. Various needles and instruments are described and used, all with apparently similar results. We have used the Franklin modification of the Vim Silverman needle to our satisfaction. This needle has the following advantages; 1. It can be easily introduced under local anesthesia with minimal trauma; 2. It is simple in construction; 3. Once its use has been mastered, adequate tissue can be obtained for study. A disadvantage as compared to larger instruments is that the tissue obtained is small and friable. The Franklin modification differs from the original Vim Silverman needle in that there is a metallic dome across the inner blades near the tip which traps the small cylinder of tissue when the outer sheath is advanced over the biopsy blade.

Perineal Needle Biopsy

This procedure can be done under local anesthesia in most cases. There is some amount of pain associated with this and in high lesions of the prostate the procedure is probably best performed under spinal or general anesthesia. The technique of perineal needle biopsy is simple and relatively easy to master. The patient is first placed in the lithotomy position. With the operator's index finger in the rectum, the needle is introduced in the perineum near

the anal margin and to the right or left of the midline, depending upon the location of the suspected lesion. The needle can be felt with the rectal finger for the entire distance, as it is advanced through the thickness of the perineum. The needle is kept just anterior to the rectum and in doing so the exact area of induration can be located. Advancement of the needle with the obturator in place is carried out until the point of the needle is up to the suspected nodule. The obturator is then removed and the inner biopsy blades are advanced through the sheath into the area to be biopsied. The outer sheath is then advanced over the protruding biopsy blades, entrapping the cylinder of tissue. The entire needle is then rotated 360 degrees severing the cylinder of tissue at the base and the needle is withdrawn. Complications of perineal needle biopsy are not common and are usually not serious. Perineal bleeding, urinary retention, hematuria, pain and urinary fistula are probably the most common.[7, 13] There are several cases reported in the literature of implantation of prostatic cancer in the subcutaneous tissue at the site of previous puncture biopsy.[17, 18]

Transrectal Needle Biopsy

We have recently used this method in preference to the perineal route and have been pleased with its simplicity and with the fact that smaller lesions of the prostate, particularly high lesions, can be biopsied with less difficulty. Prior to this procedure the patient receives neomycin for forty-eight hours. One gram of neomycin is administered every hour for four doses and then one gram every four hours for the remaining time. Soap suds enema is given the night prior to biopsy and repeated the morning of biopsy.

Usually, anesthesia is not necessary. This procedure can be done in most cases without difficulty under adequate sedation. The prone position with the patient jack-knifed as for hemorrhoidectomy is the position of choice. We have done a number of these biopsies in the lithotomy position, combined with cystoscopy and found that this was not as satisfactory. The buttocks are held apart using three inch adhesive tape and the patient's perineum and rectum are prepared with phisohex. The rectal sphincter is gently dilated with a well lubricated finger and a Hill-Ferguson retractor is inserted and held in place by an assistant. The bevel of the Franklin needle is then held against the pad of the index finger and both are introduced into the rectum. The indurated area can be easily palpated and the tip of the needle introduced directly into it. We have found that inserting the biopsy blades approximately half way into the needle sheath prior to introduction of the needle as recommended by Daves[19] instead of having to remove the obturator of the needle after it has been inserted is a distinct advantage. After introducing the tip of the needle into the indurated area, the operator steadies the needle with the opposite hand. The index finger is removed from the rectum and the biopsy blades are advanced into the area without any chance of misplacing the needle. The use of the rectal retractor permits adequate visualization and prompt recognition of excessive rectal bleeding. The complications associated with transrectal needle biopsy are similar to those seen with perineal biopsy. All of these patients should be kept on antibiotics postoperatively to reduce the incidence of prostatitis.

Needle biopsy of the prostate by either the perineal and/or transrectal method can be accomplished using only local anesthesia or sedation which is a distinct advantage. Tissue obtained can be studied on permanent rather than frozen section and repeat biopsies are possible. The percentage of accuracy improves with experience. Most authors report an overall accuracy of 75 to 85 per cent.[20] The principal limitation to the reliability of needle biopsy is the fact that a negative biopsy does not rule out the existence of carcinoma.

Summary

Routine annual rectal examination after forty years of age is the best screening procedure for the detection of early carci-

noma of the prostate. Histological diagnosis in suspected cases of prostatic carcinoma is of utmost importance. Open perineal biopsy, for the urologists who still prefer to apply the radical perineal prostatectomy to their curable patients, is the procedure of choice. Needle biopsy, both transperineal and transrectal are of great value in securing permanent histological specimens in (1) Patients with operable carcinoma who are to have a radical retropubic prostatectomy. (2) Cases of early carcinoma in patient whose age or general condition would not warrant radical surgery and palliative treatment is planned. (3) Advanced inoperable cases prior to orchidectomy.

References

1. Baron, Edgar; Angrist, Alfred: Incidence of Occult Adenocarcinoma of the Prostate After 50 Years of Age. Arch. Path. 32:787, 1941.

2. Creevy, C. D.: Carcinoma of the Prostate Glands. J.A.M.A. 138:412, 1948.

3. Kimbrough, James C., Rowe, Robert B.: Carcinoma of the Prostate. J. Urol. 66:373, 1951.

4. Hudson, Perry B.; Findle, Alex L.; Hopkins, John A.; Spronel, Erith; Stout, Arthur P.: Prostatic Cancer XI Early Prostatic Cancer Diagnosed by Arbitrary Open Perineal Biopsy Among Three Hundred Unselected Patients. Cancer. 7:690, 1954.

5. Jewitt, H. J.: Significance of the Palpable Prostatic Nodule. J.A.M.A. 160:838, 1956.

6. Herbut, Peter A.: Urological Pathology, Vol. 2. Lee & Febiger, Philadelphia, 1952, p. 935.

7. Kaufman, Joseph J.; Rosenthal, Milton; Goodwin, Willard E.: Methods of Diagnosis of Carcinoma of Prostate: A Comparison of Clinical Impression, Prostatic Smear, Needle Biopsy, Open Perineal Biopsy and Transurethral Biopsy. J. Urol. 72:450, 1954.

8. Silverblatt, John M.; Soloman, Searle; Hyman, Richard M.: Exfoliative Cytology as a Screening Method in Prostatic Carcinoma. J. Urol. 75:734 (April) 1956.

9. Culp, Ormond S.; McDonald, J. R.: Importance of Frozen Section in Evaluating Prostatic Nodules. J. Urol. 72:443 (Sept.) 1954.

10. Jewitt, Hugh J.: Radical Perineal Prostatectomy of Carcinoma. J.A.M.A. 156:1039 (Nov.) 1954.

11. Dahlen, Carl P.; Goodwin, Willard E.: Sexual Potency After Perineal Biopsy. J. Urol. 77:660 (April) 1957.

12. Finkle, Alex L.; Moyers, Thomas G.: Sexual Potency in Aging Males Cortal Ability Following Open Perineal Prostatic Biopsy. J. Urol. 84:649 (Nov.) 1960.

13. Parry, William L.; Finelli, Joseph S.: Biopsy of Prostate. J. Urol. 84:643 (Nov.) 1960.

14. Grabstald, Harry: Summary of Currently Employed Prostatic Biopsy Methods With Comments Concerning Combined Transrectal Biopsy in Radical Retropubic Prostatectomy. Brit. J. Urol. 28:176, 1958.

15. Grabstald, Harry: Further Experiences With Transrectal Biopsy of the Prostate. J. Urol. 75:211 (Aug.) 1954.

16. Pearlman, Carl K.: Transrectal Biopsy of the Prostate. J. Urol. 74:387 (Sept.) 1955.

17. Clarke, B. G.; Ledbetter, Wyland F.; Campbell, James S.: Implantation of Cancer of the Prostate in the Site of Perineal Biopsy. Report of a Case. J. Urol. 70: 937 (Dec.) 1953.

18. Goldman, Eugene J.; Samellos, William: Local Extension of Carcinoma of the Prostate Following Needle Biopsy. J. Urol. 84:575 (Oct.) 1960.

19. Daves, James A.; Tomskey, Gilbert C.; Cohen, Arthur E.: Transrectal Needle Biopsy of the Prostate, J. Urol. 85:180 (Feb.) 1961.

20. Kaufman, Joseph J.; Schultz, Joseph I.: Needle Biopsy of the Prostate. J. Urol. 87:164 (Feb.) 1962.

Too Many Drugs Better Than Too Few

Despite the seeming inefficiencies of free competition, I, as a physician, would rather be deluged with more medical preparations than be forced to sit idle at the bedside of a patient — doing nothing because there are not enough drugs to save lives or comfort my patients. As the president of a pharmaceutical firm, I would rather be accused of trying too hard to market my useful products than to default on marketing and—as a result—lose sales and thereby increase the costs of products to the consumer. — Theodore Klumpp, M.D. in **New Medical Meteria**, June 1962.

Observations on Acute Athletic Ligamentous Injuries to the Knee*

• Early diagnosis and treatment are necessary to secure the best results.

C. W. LOWREY, M. D.
P. M. DAVIS, JR., M. D.
T. E. BANKS, M. D.
Alexandria

THERE is no doubt that competitive contact athletics have great appeal to the American people. Most popular in this field is football. As a result of football, injuries do occur, but I feel in general, they are relatively less frequent in organized athletics than in the past. This has been aided by better conditioning, better officiating, and better co-operation between physician, coach, and trainer.

It is our purpose in this presentation to focus attention on acute ligamentous injuries of the knee as a result of football. The knee is a vulnerable area, as well as a weapon since a 185 pound fullback with two steps can generate a 725 pound force. The knee cannot be effectively taped as can the ankle and the only protection is good co-ordination and strength which is the result of properly supervised training.

Much has been written on the etiology and pathogenesis of various ligamentous injuries of the knee. In addition, more has been written on the various forms of treatment. We can add nothing to this knowledge, but with these cases, we hope to re-emphasize the pertinent points and show with these cases also, the benefits of early diagnosis followed by early proper treatment.

Diagnosis

Early diagnosis of the ligamentous injury is imperative. Ideally attendance at the game with observation as to the mechanism of injury is invaluable. Was the player clipped? Was he punting and roughed? Did he cut back quickly or did he injure the knee in a warm up such as a duck walk? Incidentally, I feel this latter should be deleted from athletic training as it is a frequent cause of posterior horn tears of the medial meniscus. Knowing the mechanism of injury and correlating it with early examination are the most effective means of diagnosing ligamentous injury. If examination is delayed, muscle spasm may splint the knee and conceal ligamentous injury. In examining the knee, the football gear and/or pants should be removed. Medial lateral and anteroposterior stability as well as the range of motion should be checked first in the uninjured knee. Then the injured knee is compared to the normal, noting in addition, the areas of tenderness.

X-ray

X-ray films are indicated as a routine part of the examination. Often the routine AP and lateral views are disappointing as a diagnostic aid. However, stress films are a great diagnostic aid and I believe these should be included in every evaluation of a fresh knee injury with suspected ligamentous injury. To test for medial stability, the thighs are strapped together and multiple pillows are wedged between the tibiae separating the ankles and placing a valgus strain in extension. If a varus strain is desired, the ankles may be strapped and pillow wedging be done between the thighs. This test is reliable without anesthesia and there is no need for anesthesia, local or general. Positive

* Presented before the Eighty-second Annual Meeting of the Louisiana State Medical Society, May 9, 1962, Monroe.

stress films are diagnostic, but negative ones do not rule out ligamentous injury.

Treatment

In treating acute major ligamentous injury, prompt surgical repair should be done, preferably before a week and after two weeks the golden time of ligamentous repair has ended. The surgery should be followed by immobilization, preferably plaster for a four week minimum. A rigid program of quadriceps and hamstring rehabilitation exercises should be instituted first by setting exercises only and later by resistive exercises, and as is now becoming popular, isometric contractions. Continued use of the injured knee with taping, etc., and without immobilization is desertion of the injured player by his coach and physician.

Combination of Injuries

In this series, the most serious injury was the so called "unhappy triad". This expression was coined by Dr. O'Donohue of Oklahoma, who used it to focus our attention not to an isolated injury, but the combination of injuries. This includes rupture of the anterior cruciate, the medial collateral ligament, and the tear of the medial meniscus. In the surgery for this condition, we restore all accessible torn ligaments and remove the torn cartilage. In combination meniscal tears and cruciate tears, we have repaired the ligament and removed the cartilage. We have not been successful in restoring stability in the late cruciate tears although reapproximation was possible.

Cases

The cases presented here are the accumulation of one season's injuries treated by our group in Central Louisiana, by three orthopedists. We have observed 8 cases of severe ligamentous injuries and in addition, two injuries to the distal femoral epiphysis. We have omitted meniscal tears except those accompanied by ligamentous injury. The distal femoral epiphyseal lesions were included because in a younger player this injury can give the same clinical findings as a severe ligamentous injury.

Our group included five classed as the "unhappy triad" although in two of these the anterior cruciate tear was incomplete. One had in addition, complete anterior and posterior cruciate tears as well as a posterior capsular tear which exposed the neurovascular bundle from within the joint. One in the group refused treatment and has refused to return for follow-up. One had an isolated tear of the anterior cruciate and the remaining two had combinations of anterior cruciate and cartilagenous injuries. All cases were immobilized in plaster a minimum of four weeks postoperatively with lesser immobilization for two additional weeks with the cotton cast of O'Donoghue.

Case No. 1. A.L., 13 year old colored male in an intrasquad scrimmage on September 5, 1961. The patient was running downfield when blocked and his right knee hit an opposing player. No definite rotation strain was known. Pain and swelling occurred afterwards. He came to our office the following day. Examination revealed pain on any right knee motion and obvious effusion. There was pain on adduction strain, but no additional instability. Marked relaxation of medial structures was noted.

X-rays were negative.

Surgery was done on September 7, 1961 and medial condylar fracture noted. This was fixed with Knowles pins.

Had pre-operative stress films been secured, this patient could have been treated conservatively for this fracture. The result at present is good and he is participating in athletics as desired. He is being followed for possible growth disturbance due to the epiphyseal injury.

Case No. 2. H.R., 15 year old white male. This "B" squad quarterback was running toward the sideline with the ball. He cut to go down field and just as the cut was made, all the weight was on the left leg when he was tackled from the front and left. Immediate knee pain and swelling.

Examination revealed a swollen tender left knee with pain on motion. Suggestive medial instability was present.

Stress x-rays revealed shift of distal femoral epiphysis.

The treatment was closed reduction. A long leg cast was utilized for six weeks. The patient has now returned to athletics and won the varsity low hurdles in a recent track meet.

Case No. 3. C.B., 16 year old white male. This varsity fullback plunged for short yardage at

the goal and made a touchdown. He injured his right knee in the resultant pile-up.

Examination revealed marked medial relaxation with joint pain and tenderness.

X-rays showed no fracture. Medial joint widening on stress was present.

Diagnosis of complete tear of medial collateral ligament, right knee was made.

Treatment consisted of surgical repair of the medial collateral on November 7, 1961, and removal of a peripherally torn medial cartilage. The anterior cruciate was in continuity, but partially torn.

His cast was removed four weeks postoperatively and he has participated in track events this spring.

Case No. 4. R.M., 18 year old white male. This freshman college end hit his right knee from the front on the shoulder pad of an opposing player on August 31, 1961. There was immediate pain and gradual swelling after the injury.

Examination two hours postinjury revealed knee range of motion from 180° to 90°. The anterior cruciate was stable. Medial collateral tenderness but no gross instability. Minimal swelling was evident.

X-rays showed no fracture.

Treatment was immobilization with a pressure dressing. Six days later the dressing was removed and tenderness was marked at the joint line and considerable swelling was now present. Stress films revealed medial joint widening. Eight days postinjury repair of a medial collateral double level tear and removal of a peripherally torn medial meniscus. The postoperative course was uneventful and he returned to intramural sports.

He is now under care for a recent ankle injury sustained in a basketball game.

Case No. 5. D.M., 15 year old white male. This halfback was injured when he was clipped on kick-off of game on September 15, 1961. The left knee was injured and there was immediate severe pain and swelling.

Examination revealed a grossly unstable painful knee with acute tenderness over medial femoral condyle and joint line.

X-ray revealed no fractures. A stress film was not secured.

Surgery was done on September 19, 1961, with repair of both cruciates, the medial collateral ligament and part of posterior capsule. This was the most severe injury of our series and the capsular tear was so extensive that the neurovascular structures could be seen through the anteromedial arthrotomy incision.

The postoperative course has been good due to muscle rehabilitation, but the final evaluation still reveals considerable cruciate and minimal medial collateral instability. It would be advisable for this boy to quit football.

Summary

In these cases we hope that we have demonstrated the benefits of early diagnosis and treatment of ligamentous injuries to the knee. With early adequate care, the athlete can usually be returned to football with a strong knee. If we are aware of the ligamentous injury, evaluate it properly and treat it early, we can avoid the major difficulty which exists and that is the lack of adequate diagnosis at the time of initial injury.

References

1. O'Donoghue, Don H.: Symposium on injuries to Athletes, American Academy of Orthopaedic Surgeons. Instructional Course Lectures. 16:13. 1959.

2. Hughston, J. C., Whatley, G. S., and Dodelin, R. A.: The Athlete and his Knees, Sou. M. J., 54:1372. 1961.

3. Speed, J. S., and Knight, R. A.: Campbell's Operative Orthopaedics. 1:332. 1956.

4. Clayton, M. L. and Weir, G. J., Jr.: Experimental Investigations of Ligamentous Healing. Amer. J. Surg. 98:373, 1959.

Value of Advertising

If there were no pharmaceutical advertising, new lifesaving drugs would be withheld from the critically ill patients, either because we the physicians did not know the new drug existed or we did not know its exact indications and how to administer it safely and effectively. The pharmaceutical industry is having to carry the Herculean load of protecting its livelihood, and providing the world with these lifesaving remedies.—Troy A. Shafer, M. D., Chairman, Board of Trustees, Texas Medical Association, in **Texas State Journal of Medicine**, Oct. 1962.

The Journal of the Louisiana State Medical Society

Established 1844

Published by The Journal of the Louisiana State Medical Society, Inc. under the jurisdiction of the following named Journal Committee:

Ralph H. Riggs, M. D., Ex-Officio
C. M. Horton, M. D., Chairman
Sam Hobson, M. D., Secretary
Edwin H. Lawson, M. D.
J. E. Knighton, M. D.
M. D. Paine, Jr., M. D.

EDITORIAL STAFF

PHILIP H. JONES, M. D., Editor

COLLABORATORS—COUNCILORS

Nicholas J. Chetta, M. D.
J. E. Clayton, M. D.
Guy R. Jones, M. D.
C. E. Boyd, M. D.
Henson S. Coon, M. D.
John L. Beven, M. D.
J. Y. Garber, M. D.
R. E. C. Miller, M. D.

C. GRENES COLE, M. D., General Manager
1430 Tulane Avenue

Subscription Terms: $4.00 per year in advance, postage paid, for the United States; $5.00 per year for all foreign countries belonging to the Postal Union.

News material for publication should be received not later than the eighteenth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

Manuscripts should be addressed to the Editor, 1430 Tulane Ave., New Orleans, La.
The Journal does not hold itself responsible for statements made by any contributor.

Editorial

The New King-Anderson Bill "Fedicare"

The administration's latest version of the social security plan for providing certain hospital-medical benefits to the aged through higher social security taxes has the title "Hospital Insurance Act of 1963." The numbers are H.R. 3920 (House) and S. 880 (Senate). It was introduced as indicated by Representative Cecil King (Democrat, California) and Senator Clinton P. Anderson (Democrat, New Mexico).

The bill would amend the Social Security Law by adding a new program under which inpatient hospital services, skilled nursing facility services, home health services, and outpatient hospital diagnostic services would be provided to those over 65 years of age who are entitled to monthly insurance benefits under the Social Security Law or the Railroad Retirement Act. Also to any individual 65 years of age who is not entitled to these benefits and who attains that age before 1967 and also after 1967 to anyone who has three-quarters of coverage, whenever acquired, under the Social Security Law or Railroad Retirement Act for each year that elapses after 1964 and before he attains the age of 65.

The bill provides inpatient hospitalization up to ninety days in semiprivate accommodations (two-to-four-bed) subject to a deductible of $10 for each of the first nine days of hospitalization, with a minimum deductible of $20. Two alternative options are available which are of doubtful value. Also there is a provision for skilled nursing facilities service up to one hundred and eighty days in a hospital-affiliated institution; home health services up to a maximum of 240 visits during a calendar year by persons furnishing these services (nursing, physical and occupational therapy, etc.) under an authorized program; outpatient hospital diagnostic services during a period of thirty consecutive days subject to a deductible of $20.

The larger part of the program would be financed beginning January 1, 1965.

Skilled nursing facility services would be financed beginning July 1, 1965.

There would be created a 14-man Hospital Insurance Benefits Advisory Council, at least four of whom would be persons outstanding in fields pertaining to hospitals and health activities. These are to advise the Department of HEW on administration of the program.

The estimated cost on the part of the authors is $7 billion for the first five years. Competent insurance actuaries estimate that the actual cost will be twice this or more, and that by 1983 the cost will be $5.4 billion a year.

We have, therefore, before us a proposed law similar to the King-Anderson Bill of the previous Congress which has one important addition, that is, provision is made for the 2½ to 3½ million over 65 who are not at present eligible for Social Security Benefits. The objections to the former King-Anderson Bill, in either its original or modified form, apply with equal force to the present bill. The faults in this piece of legislation, aside from the general principle involved, are numerous. As one very competent authority states, "one may say that S. 880 is a fine example of semantics and obfuscation." Many phrases in the bill are obviously designed to intrigue the interest and play on the emotion of the so-called senior citizen. The phrase "without the exercise of any federal supervision or control over the practice in medicine by any doctor or over the manner in which medical services are provided by any hospital—" is designed to give the public a false sense of security against federal interference or "Fedicare". After the assurance of this prohibition against any federal interference come many pages further on, "regulations": "SEC. 1717. When used in this title the term 'regulations' means, unless the context otherwise requires, regulations prescribed by the secretary"; that is, HEW Secretary, Celebreeze, whose Assistant in charge of these matters is Wilbur J. Cohen. Regulations that will issue from these sources will have the force of law. They will direct how and under what circumstances the services provided under this bill are to be administered. The regulations will be concerned with contracts with hospitals and with other "vendors of service". Obviously by such means the bill would interfere with and regulate medical practice and administration in the nation's hospitals. The authors of this year's bill have attempted to dodge this issue by dropping one phrase —"except as otherwise specifically provided"—from the original King-Anderson Bill. However, the power of the bill and the power of the regulations have not been deleted.

Freedom of choice is a promise and not a reality. The small print says the patient may obtain services only from institutions or agencies that have agreed to the government's terms. The patient whose personal physician is not on the staff of the hospital to which the patient is admitted under the government's terms will have to accept another physician. The patient's choice of nursing homes would be more restricted since only those controlled or affiliated with the hospital would qualify under the bill. The prospect is that hospitals and agencies will have to sign contracts without knowing what rules and regulations will be forthcoming later on. As Dr. Marjorie Shearon says "theirs will certainly be a blind date with an uncertain fate." In spite of the protestation to the contrary the services of many physicians will be controlled by these regulations. These will be the physicians who are now employed part or full-time by the hospital in the usual and normal operation of hospital services. These are pathologists, radiologists, physiatrists, anesthesiologists, residents and interns. These physicians will find themselves directly affected by whatever regulations the Social Security Department may choose to issue.

Another provision by which the private physician will be subject to these regulations is that he will be expected to certify that a prospective beneficiary under the bill is in need of hospitalization. It takes no imagination to visualize the regulations

and forms under which he will be "permitted" to make such certification.

All the cost in such proposals as these is of little consequence to the administration. It is of great consequence to those who will pay it. It is proposed that after 1965 the tax base will be $5200 instead of $4800. The tax for employee and employer will be 3⅞ per cent or $201.50 each. The proposed law increases the tax base, the tax rate and the timetable for the increases. While its proponents say that young workers would have to pay only a dollar a month for "insurance" actually an additional tax on the young worker for the first year will be $14.50 and by 1968 $31.50 in addition to the Social Security taxes they are already paying.

The bill departs from the principle of providing cash benefits to Social Security recipients. It proposes from now on service benefits. It changes the right of the individual to spend his own money and it would provide the government with a mechanism for seizing monopoly control over services of any kind. The bill in its operation would tax everyone now working to provide hospital benefits for nearly everyone over 65, most of whom are not working. If this bill becomes law it will be a triumph for political medicine and "Fedicare" will become a reality.

ORGANIZATION SECTION

The Executive Committee dedicates this section to the members of the Louisiana State Medical Society, feeling that a proper discussion of salient issues will contribute to the understanding and fortification of our Society.

An informed profession should be a wise one.

THE KING-ANDERSON BILL

Louisiana taxpayers will be forced to pay $16,400,000 more taxes the first year alone if the Administration's King-Anderson Bill (H.R. 3920) is enacted by the 88th Congress.

It is inconceivable that the Administration would attempt to push through Congress a tax increase of this magnitude at a time when it is advocating a tax reduction.

The $16,400,000 tax increase for Louisiana citizens is based on the Administration's estimates of the cost of the health care for the aged proposal.

Insurance actuaries, however, believe the King-Anderson Bill would cost at least twice the Administration's estimate. In all likelihood Louisiana's share of this tax load would be even more staggering.

It should be emphasized that these tax figures are only for the first year. They will increase substantially as the number of eligible beneficiaries increases.

The King-Anderson Bill, sometimes referred to as "Medicare," would provide limited health care benefits for everyone 65 and over. Only those who have social security and railroad retirement are eligible.

The proposal would be financed by a double-barreled social security tax increase plus a boost in general revenue taxes to provide benefits for all the aged regardless of need.

A wage-earner making $5,200 or more a year, or $100 a week, would pay $27.50 in additional taxes, and his employer a like amount for a total of $55. This is a 16 per cent tax increase.

In addition, the wage-earner and employer would pay extra taxes for benefits for the aged not covered by social security or railroad retirement. Louisiana's share of this tax increase would amount to $2,900,000.

Louisiana workers now earning $5,200 or more a year are paying $174 in social security taxes. Additional social security tax increases already scheduled to go into effect in 1966 and 1968 will further boost their payroll deduction to $222. If the King-Anderson Bill becomes law, these workers will have at least $253.50 deducted from their paychecks by 1968.

The Louisiana workers paid $107,700,000 in social security taxes in 1961 and will pay $146,500,000 in 1965 under the present law. But if King-Anderson becomes law and goes into effect in 1965, Louisiana workers will be compelled to pay $160,000,000 in social security taxes, plus an additional $2,900,000 in general revenue taxes.

Louisiana will have 266,000 persons age 65 or over in 1965.

The reason the King-Anderson proposal is staggeringly costly is the fact it provides benefits for all persons over 65 regardless of their financial status. This means its benefits would be available to millions of the well-to-do and wealthy who can well afford to pay for their own care.

The King-Anderson tax would be inequitable, falling heaviest on those least able to pay. The $5,200-a-year factory worker would pay the same tax for this unnecessary program as the $52,000-a-year executive.

The physicians of Louisiana strongly believe that every aged person who needs health care should get it regardless of his ability to pay.

We favor the Kerr-Mills law, passed by Congress in 1960, for helping those who need help, and voluntary health insurance and prepayment plans for those who can afford them.

It is pointed out that more than 9,500,000, or 55 per cent, of the nation's elderly already have health insurance and are buying it at a faster rate than any other age group.

By helping those who need help through the Kerr-Mills law and letting those who can take care of themselves do so, the taxpayers of Louisiana can be saved millions of dollars a year.

Passage of the King-Anderson proposal would immediately impose an unbelievable liability of $35,000,000,000 (billion) on today's wage-earners who need their present earnings to educate their children and to provide for their own health care needs. The $35,000,000,000 is the government's estimate of the cost of providing King-Anderson benefits to those eligible for the plan who would not have contributed one dime to the program.

It is hoped that Louisiana doctors and other citizens will let their congressmen and senators know their view on this important issue.

The sources for the figures used are as follows:

Social Security taxes paid by taxpayers of Louisiana in 1961: Annual Statistical Supplement of the Social Security Bulletin, 1961, Table 23.

Social Security taxes paid by taxpayers in Louisiana in 1965 under present law: Figures adjusted to reflect rate increase since 1961 and expansion of coverage plus economic growth at the rate of 3 per cent per year.

$$\frac{(3.625 \times 1.03 \times 1.03 \times 1.03 \text{ equals } 1.36)}{3}$$

Additional Social Security taxes Louisiana taxpayers would pay if King-Anderson became law: Calculated from average earnings per worker given in Annual Statistical Supplement of the Social Security Bulletin, 1961, Table 24.

Louisiana's contribution to general welfare taxes for those not covered by Social Security: R. J. Myers, Chief Actuary, Social Security administration 2/28/63.

Number of aged persons in Louisiana: Congressional Record, May 17, 1962, page 1018.

Thirty-five billion dollars liability: Congressional Record, July 16, 1962, page 12714.

MEDICAL NEWS SECTION

CALENDAR

PARISH AND DISTRICT MEDICAL SOCIETY MEETINGS

Society	Date	Place
Ascension	Third Tuesday of every month	
Calcasieu	Fourth Tuesday of every other month	Lake Charles
East Baton Rouge	Second Tuesday of every month	Baton Rouge
Jefferson	Third Thursday of every month	
Lafayette	Second Tuesday of every month	Lafayette
Lafourche	Last Tuesday of every other month	
Morehouse	Third Tuesday of every month	Bastrop
Natchitoches	Second Tuesday of every month	
Orleans	Second Monday of every month	New Orleans
Ouachita	First Thursday of every month	Monroe
Rapides	First Monday of every month	Alexandria
Sabine	First Wednesday of every month	
Tangipahoa	Second and fourth Thursdays of every month	Independence
Second District	Third Thursday of every month	
Shreveport	First Tuesday of every month	Shreveport
Vernon	First Thursday of every month	

COMING MEETINGS

The New Orleans Academy of Internal Medicine will hold its spring meeting beginning at 7 o'clock at Lenfant's Restaurant on Thursday, May 16.

Tennessee Valley Medical Assembly, Read House, Chattanooga, Tennessee, September 30 and October 1.

1963 Scientific Session, American Cancer Society, Biltmore Hotel, New York City, October 21-22.

FREQUENT PROBLEMS IN PRACTICE TO BE AIRED AT AMA '63 MEETING

The latest information on some of the most common problems that confront physicians will be presented at eight general scientific sessions during the annual meeting of the American Medical Association in Atlantic City, June 16-20.

Heart attacks, strokes, cancer, peptic ulcer, heredity, obesity, venereal disease, and painful back will be covered in lectures or panel discussions.

A series of lectures on modern concepts of acute myocardial infarction, including basic physiological and pathological considerations, will be presented by Jesse E. Edwards, M. D., St. Paul, Minn.; Richard J. Bing, M. D., Detroit; Jack W. Crowell, Ph.D., Jackson, Miss.; Carleton B. Chapman, M. D., Dallas; Franklin D. Johnston, M. D., Ann Arbor, Mich., and Thomas N. James, M. D., Detroit.

A day-long symposium on strokes is scheduled on Wednesday, June 19. Participants include Louis Sokoloff, M. D., Bethesda, Md., C. Miller Fisher, M. D., Boston; Clark H. Millikan, M. D., Rochester, Minn.; T. H. Newton, M. D., San Francisco; John Stirling Meyer, M. D., Detroit, and James E. Eckenhoff, M. D., Philadelphia. Others are Ellen McDevitt, M. D., New York City; Edwin J. Wylie, M. D., San Francisco; Donald A. Covalt, M. D., New York City; Roy R. Greening, M. D., Philadelphia; H. L. Baker, M. D., Rochester, Minn. and J. Lawrence Pool, M. D., New York City.

The question, "What Drugs for What Cancers by What Doctors?," will be answered by Donald B. Rochlin, M. D., Los Angeles, Albert Segaloff, M. D., New Orleans, Robert G. Ravdin, M. D., Philadelphia, and Fred J. Ansfield, M. D., Madison, Wis., in lectures followed by a panel discussion.

A full day's program will be devoted to a symposium on newer knowledge and therapy of peptic ulcer on Monday, June 17. The 11 speakers are David State, M. D., New York City; Eldon Foltz, M. D., Seattle; John Campbell, M. D., Indianapolis; James L. A. Roth, M. D., Philadelphia; Joseph B. Kirsner, M. D., Chicago; John Bruce, M. D., Edinburgh, Scotland; Edward R. Woodward, M. D., Gainesville, Fla.; H. William Scott, Jr., M. D., Nashville, Tenn.; Claude E. Welch, M. D., Boston; George A. Hallenbeck, M. D., Rochester, Minn. and Eugene Bernstein, M. D., Minneapolis.

A panel discussion on medical genetics will bring together David Y. Y. Hsia, M. D., Chicago; Harold F. Falls, M. D., Ann Arbor, Mich.; Maurice T. Fliegelman, M. D., Louisville; E. Burke Evans, M. D., Galveston, Texas, and David C. Fainer, M. D., Baltimore.

Various problems associated with the treatment of obesity will be explored by a six-man panel consisting of Edgar S. Gordon, M. D., Madison, Wis.; Eliot Stellar, Ph.D., Philadelphia; Albert Stunkard, M. D., Philadelphia; Charlotte M. Young, M. D., Ithaca, N. Y.; Garfield G. Duncan, M. D., Philadelphia and Seymour L. Halpern, M. D., New York City.

Participating in a symposium on venereal disease will be R. H. Kampmeier, M. D., Nashville, Tenn.; M. Brittain Moore, Jr., M. D., Atlanta;

Sidney Olansky, M. D., Atlanta; Nicholas J. Fiumara, M. D., Boston; D. B. Stewart, M. D., Mona, Jamaica, B.W.I. and Kyril B. Conger, M. D., Philadelphia.

An analysis of the painful back will take the form of a panel discussion among H. Relton McCarroll, M. D., St. Louis; Allen S. Russek, M. D., New York City; Robert D. Moreton, M. D., Fort Worth, Texas, and Eben Alexander, M. D., Winston-Salem, N. C.

MEASLES VACCINES APPROVED

Licenses for the manufacture of two types of measles vaccines have been approved by Anthony J. Celebrezze, Secretary of Health, Education, and Welfare. This action was taken on the recommendation of Luther L. Terry, Surgeon General of the Public Health Service.

Licensed firms are Merck, Sharp, and Dohme of Philadelphia, Pennsylvania, to market live attenuated measles vaccine in interstate commerce, and Chas. Pfizer & Co., Inc., of New York, New York, and Terre Haute, Indiana, to market inactivated vaccine. This action permits distribution of the vaccine to the Nation's physicians. A limited quantity of the live vaccine will be available immediately. The killed vaccine will become available within a few weeks. It is expected that both vaccines will be generally available within several months.

Under the National Biologics Control Act, a license for the manufacture and interstate distribution of vaccines, serums, antitoxins, and similar biological products for medical use can be issued when the manufacturer demonstrates that his product meets Federal standards of safety, purity, and potency. Such products are tested and evaluated to see that they meet these standards by the Division of Biologics Standards of the National Institutes of Health, the research arm of the Public Health Service.

Development of the measles vaccines stems from the work of Nobel prize winner Dr. John Enders of Harvard University and an associate, Dr. Thomas Peebles, who isolated a strain of the measles virus in 1954. From this original strain of the virus, designated the Edmonston strain, both live and killed vaccines have been produced.

Measles is the Number One childhood disease. Among children, measles may lead to deafness, mental crippling, and pneumonia. In adults, measles is a severe and sometimes fatal disease. While measles constitutes a significant health problem in the United States, it is even more serious in other parts of the world. In Africa and South America, for example, the death rate among children may be as high as 25 per cent.

Over the past several years, the vaccines have been successfully tested both in this country and abroad. Nearly 50,000 children in the United States alone have received these vaccines in field trials. Secretary Celebrezze characterized the field trials as "a long and painstaking evaluation" and said that "this was made possible by the cooperative efforts of scientists—both in and out of government—by physicians, the pharmaceutical industry, and thousands of unselfish and courageous parents who have permitted their children to participate in the field trials. This splendid teamwork between science, government, industry, and the general public has scored a great victory for better child health which will be hailed in all countries and by all people."

The Agency for International Development has set aside $500,000 for the purchase of vaccines and equipment and for training, under Public Health Service supervision, teams of technicians in a dozen African nations.

Secretary Celebrezze said that "as supplies of the measles vaccines become available in the coming months and as children are vaccinated in increasing numbers, we will be well on the way to eradicating a disease that, down through the centuries, has killed millions of children and left others impaired mentally or physically. Speaking for the Department of Health, Education, and Welfare, I congratulate all those who have contributed in any way toward this great achievement."

DR. SPRAGUE APPOINTED DEAN OF TULANE SCHOOL OF MEDICINE

Dr. Charles C. Sprague, professor of medicine and director of the hematology laboratory at Tulane University, has been appointed dean of Tulane University School of Medicine, it has been announced by Dr. Herbert E. Longenecker, Tulane president.

He succeeds Dr. M. E. Lapham, who had been dean for 23 years, and was appointed Provost of the University February 1.

Dr. Sprague, who has become the 17th dean in the 129 year history of the school of medicine, has been associated with Tulane since 1952 when he joined the faculty as assistant professor of medicine. He is a nationally recognized leader in the field of hematology. He established the research laboratory in hematology at Tulane in 1952 and has served as its director since that time.

Dr. Sprague has been active in the training of younger physicians in hematology and was awarded a training grant in 1961 by the U. S. Public Health Service to support trainees working under his direction.

Dr. Sprague is a native of Dallas and graduated from Southern Methodist University in 1940. He received his doctor of medicine degree from the University of Texas School of Medicine in 1943. From 1943 until 1947 he served with the U. S. Naval Amphibious Forces

and as a ward medical officer at the U. S. Naval Hospital in Corona, Calif.

After this service, he received postgraduate medicine training on the Tulane service of Charity Hospital in New Orleans and in the department of medicine at Tulane. He later served as a Commonwealth Research fellow in hematology at Washington University, St. Louis, and Oxford University, Oxford, England.

His research interests at Tulane have centered on various types of anemia, the transplantation of bone marrow, the chemotherapy of leukemia, and the potential role of immunology in neoplastic disease. As part of his research work, Dr. Sprague serves as chairman of the Adult Section of the Southwest Cancer Chemotherapy Group which evaluates new drugs and chemicals in the treatment of cancer.

He is the author of 20 papers in scientific and medical journals and is a member of a number of medical societies including the American Society of Hematology of which he is a member of the executive committee.

Dr. Sprague is a senior visiting physician at Charity Hospital of Louisiana at New Orleans, consultant in hematology at Veterans Administration Hospital and the U. S. Public Health Service Hospital, and consultant to the blood bank at Touro Infirmary and the U. S. Army Hospital, Camp Leroy Johnson.

TRUDEAU SCHOOL OF TUBERCULOSIS AND OTHER PULMONARY DISEASES

Forty-eighth Session, 1963

The Forty-eighth Session of the Trudeau School of Tuberculosis and Other Pulmonary Diseases, established in 1916, will be held in Saranac Lake, N. Y. from June 3 to 21, 1963. This annual postgraduate course for physicians provides outstanding instruction in the field of chest diseases at a minimal tuition of $100 for a three weeks session. Attendance at the Trudeau School carries with it a thorough review for specialization in pulmonary diseases or for work in public health involving tuberculosis.

The local medical faculty of approximately thirty doctors from Saranac Lake, Ray Brook State Tuberculosis Hospital, the Sunmount Veterans Administration Hospital and the Will Rogers hospital, and about thirty of the leading teachers and investigators in the field of chest diseases in the eastern United States and Canada, lecture and conduct seminars in their special fields. Approximately half of the time is devoted to tuberculosis and the other half divided between such subjects as silicosis, pulmonary fibrosis, emphysema, fungus infection, sarcoidosis, pneumonias and intrathoracic tumors.

The enrollment is necessarily limited and therefore application should be made early.

Inquiries should be addressed to the Secretary, Trudeau School of Tuberculosis and Other Pulmonary Diseases, Box 670, Saranac Lake, N. Y.

DR. ROBERT F. SHARP APPOINTED COUNCILOR-ELECT OF THE SOUTHERN MEDICAL ASSOCIATION

The appointment of Robert F. Sharp, M. D., of New Orleans, as Councilor-Elect from Louisiana of the Southern Medical Association was announced recently by Robert D. Moreton, M. D., Fort Worth, Texas, President-Elect. Dr. Sharp will be installed as Councilor from Louisiana, serving a five-year term, at the close of the forthcoming annual meeting of the Association to be held in New Orleans, Louisiana, November 18-21, 1963, and, thereby become a member of the governing body of the Association. At the same meeting Dr. Moreton will be installed as the President of the Association by retiring President, Daniel L. Sexton, M. D., St. Louis, Missouri. Woodward D. Beacham, M. D., New Orleans, is currently serving the final year of his term of office as Councilor from Louisiana.

One of the largest general medical organizations in the country, the Southern Medical Association draws its membership of over 16,000 from sixteen southern states and the District of Columbia. The Association's scientific meeting, which attracts 4,000 to 6,000 annually, provides special programs for 21 medical specialties, symposia on topics of current interest, closed-circuit color television programs, and scientific and technical exhibits. The Association also owns and publishes the **Southern Medical Journal** monthly and the **Southern Medical Bulletin**, a quarterly publication.

CHEST PHYSICIANS PLAN 29TH ANNUAL MEETING IN ATLANTIC CITY THIS JUNE

The American College of Chest Physicians will hold its five-day annual meeting at the Ambassador Hotel, Atlantic City, June 13-17 this year. Dr. John F. Briggs, St. Paul, Minnesota, President of the College, will preside.

The program committee, under the chairmanship of Dr. William E. Adams, Chicago, has prepared an excellent scientific program. This will include postgraduate seminars, open forums, a cine symposium, round table luncheon sessions, formal papers, and motion pictures.

The opening session on Saturday morning, June 15, will be a symposium on "The Relationship of Autoimmunity to Cardiopulmonary Disease." Another session will be devoted to a forum on "Transplantation of Tissues and Organs." Other subjects to be included in the program are: Cardiac Rehabilitation; Pediatric Cardiology; Management of the Cardiopulmonary Cripple; Mycobacterial Diseases of the Chest; Bronchogenic Carcinoma; Anticoagulant Ther-

apy; Air Pollution and Hyperbaric Oxygen Therapy.

The annual Presidents' Banquet, highlight of the social program, will be on Sunday, June 16. The College Medal for meritorious achievement in the field of chest diseases will be awarded at the banquet. Approximately one hundred and fifty physicians will receive certificates of fellowship in the College at the annual Convocation that evening.

The American Medical Association and the American College of Chest Physicians will hold a combined meeting at the Convention Hall on Monday, June 17. In addition to the regular scientific sessions, there will be six Round Table Luncheon sessions.

Once again, the American College of Chest Physicians' always popular "Fireside Conferences" will be a part of the combined meeting with the A.M.A., and these will be held Monday evening, June 17, at the Ambassador Hotel.

Physicians attending these sessions are encouraged to ask questions and contribute to the discussions. They are free to move from table to table as they choose.

Additional information may be obtained by writing Mr. Murray Kornfeld, Executive Director, American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

DR. MULLIGAN JOINS MEDICAL STAFF OF WINTHROP LABORATORIES

Dr. John A Mulligan has been appointed an associate medical director of Winthrop Laboratories, pharmaceutical manufacturer, it was announced by Dr. Theodore G. Klumpp, president.

Dr. Mulligan had a general medical practice in Pennsylvania and is a member of the Pennsylvania Medical Society. He received an M. D. degree from New York University - Bellevue Medical College, a B. S. degree from Manhattan College, and an A. B. degree from Columbia University.

DR. RALPH H. RIGGS INVITED TO HOLLAND

Dr. Ralph H. Riggs has been invited to Holland to participate in the first World Conference on Rhinology. This is called a "Boerhaave Course" and is to be given at Leiden University in Leiden, Holland in July. The theme of this course is The Practice of Rhinology. Dr. Riggs has been invited to talk on "Indications for Nose Surgery In Children." The course is from July 9 to July 13, 1963.

BOOK REVIEWS

Diabetes Mellitus in the Tropics; by J. A. Tulloch, M. C., M. D., F. R. C. P. E. E. & S. Livingstone Ltd., Edinburgh and London, 1962. 294 pages. 37 s 6 p ($5.25).

Many diseases of temperate climates when seen in a tropical environment appear in a different guise. This is due more to the differences in age structure and culture of the population than to the climatic environment.

Diabetes mellitus is no exception, and this book shows how diabetes presents mainly in a West Indian population but also in the global tropics and amongst many different races and cultures. Amongst underdeveloped peoples diabetes is becoming much commoner, due perhaps more to changes in age structure, but also to a real increase in the disease. The incidence of diabetes from many parts of the world is given with evident racial differences in many parts. These figures have been obtained by personal contact and are as accurate as such figures can be. The reasons for the increase in the disease are discussed including diet, heredity, obesity and parity. The clinical features of the J-type of young underweight insulin dependent individual who does not become ketotic are described. The rarity of diabetic coma in many areas is described, but this complication is becoming commoner. The influence of pregnancy and sepsis on the disease is discussed. In the management of diabetes in tropical areas the necessity of adapting the treatment to local conditions and diet is deemed essential and the difficulties of management of diabetics in an illiterate poor rural community are by no means underestimated. A list of suitable dietetic regimes is given for various areas where these are applicable, but poverty makes many of these regimes almost impossible to institute. Where financial and administrative support is available good advice is given on establishing diabetic clinics in tropical areas, and it is apparent that given enthusiasm these can work very well in many unpromising circumstances. This is a practical and useful book for anyone who practices under the conditions so ably described in the text.

P. E. C. Manson-Bahr, M. D.

Modern Concepts of Hospital Administration; by Joseph Karlton Owens, Ph.D., W. B. Saunders Company, 1962, 823 pages. $16.00.

This is an excellent compendium by fifty-six

authorities on special aspects of hospital administration covering the gamut of this subject from Community Planning to the latest word on Hospital Accreditation and the Government Sponsorship of Hospital Care.

The book is divided into ten parts, each dealing with a particular phase of the subject such as: Providing Administrative Services, Providing for the Patient's Diagnostic and Therapeutic Needs, Providing Education and Research, Financing Hospital Care. Each part is divided into several chapters, each of which is written by one or more authorities. A very substantial proportion of the authors are physicians, however, many para-medical and non-medical subjects are dealt with by persons equally qualified to write definitively in his field.

This reviewer recommends this work without reservation for perusal either in its entirety, or as a reference source to cover any of the many vital ramifications of present-day hospital organization and management, such as the chapters on Organizing the Medical Staff, the Role of the Administrator, or Hospital Law. It is inevitable that since each subject is dealt with by a different individual that occasional inconsistencies or even contradictions will come to the reader's attention. It is immediately apparent, however, that these faults occur because the writers are referring to procedures followed in particular hospitals and do not qualify their recommendations to meet local conditions. The work as a whole is especially deserving of the attention of all persons concerned with the modernization and progress of hospitals in every respect including members of any hospital's medical staff.

A. P. Richard, II

Electrocardiography; by Louis Wolff, 3d ed., Saunders, 1962, 351 p. $8.50.

The third edition of Dr. Wolff's book is approximately the same length as the second edition published in 1956. However, the author has made an attempt to bring the reader up to date on changes in concepts which have occurred in recent years. Accordingly, he has attempted to apply knowledge gained in the study of vectorcardiography to the interpretation of the electrocardiogram. He has also added a section on the arrhythmias.

The book is presented to the reader in three parts. The first portion is entitled "Basic Principles of Electrocardiography" and is a beautifully lucid and concise explanation. The author starts off with electrical phenomena of the cell and later moves on to volume conductors, the electrical field around the heart, the precordial electrocardiogram, and unipolar and standard limb leads, and the Einthoven Triangle. In addition, he goes briefly into the changes associated with hypertrophy, bundle branch block, and myocardial injury and infarction.

Part II is entitled "Clinical Electrocardiography", and the reader has more difficulty grasping the concepts presented, which at times seem unnecessarily involved and confusing.

Part III, dealing with the normal and abnormal cardiac mechanism, digitalis and quinidine, regains some of the conciseness of the first portion of the book.

This book will be of value to both the general practitioner and the internist engaged in the clinical practice of medicine.

David W. Wall, M. D.

Gynecology; by Langdon Parsons, M. D., Professor of Obstetrics and Gynecology, Boston University School of Medicine, Chief of Gynecology, Massachusetts Memorial Hospitals and Sheldon C. Sommers, M. D., Pathologist, Scripps Memorial Hospital. W. B. Saunders Company, Philadelphia and London, 1962. 1250 p. $20.00.

This book is unique in many ways. It is written by a clinician and by a pathologist, both of whom are outstandingly competent in their own fields. The developmental, functional, and pathological aspects of the female reproductive system are presented with the subject matter divided into seven age groups ranging from infancy to old age. Previous texts on this subject mention age groups only as an incidental aspect of the particular problem under discussion.

The text is written in a smooth narrative form which is pleasant to read. There is some duplication of subject matter as a result of the separation into age groups.

Although it is unusual to find a male perineum in a gynecology text, the illustrations are excellent. The chapters on breast diseases are lengthy and it is debatable whether this subject should even be included in a text on Gynecology.

This book is not written primarily for the medical student, general practitioner, the Gynecologist or Pathologist but for all these groups. Its use as a general textbook for medical students in general is doubtful for the text is very comprehensive and detailed. It is an excellent reference book that most any practitioner of medicine will find beneficial.

H. D. Webster, M. D.

Pediatric Diagnosis; by Morris Green, M. D. and Julius Richmond, M. D., W. B. Saunders Company, 2d ed., 541 pages, 1962. $13.00.

The authors preface this Second Edition by pointing out that they are not attempting an encyclopedic coverage of pediatric diagnosis but intend the volume to represent another way of looking at the patient through symptoms, signs, and age periods. The approach is one of an evaluation of the patient rather than an exposition of disease patterns; one feels that the child, rather than the pathology, is getting top billing.

This attitude is particularly apparent in the introductory chapters which are concerned with pediatric history and physical examination. The authors point out that the technic and the order of obtaining information must be individualized and illustrate this thesis in a very warm and readable fashion.

These sections are worthwhile for anyone (student or practitioner) new at the game of pediatric history taking. The section on physical examination would be most helpful to the undergraduate. Here, the authors unfailingly point out the normal variants which so often concern the physician as well as the patient. They discuss briefly, but clearly, the technics and interpretations of commonly neglected aspects of physical diagnosis.

The remaining clinical sections are probably more useful to the physician with a background of clinical experience than to the student. The comprehensive, though necessarily brief, coverage of syndromes and the more obscure diseases, while serving as welcome reminders to the pediatrician, might discourage the less knowledgable. Another asset for the practitioner is the ease of locating a topic; the sections are logically and generously subdivided so that the table of contents is a detailed outline of the material covered. There is also an excellent index. The double-columning of the pages lends itself to the very desirable insertion of references within the body of the text and these references are up to date.

HANNAH WOODY, M. D.

Synopsis of Genitourinary Disease; by Austin J. Dodson, Jr., and J. Edward Hill, seventh edition, Mosby Co., 384 pages, $7.75.

This book is written for the medical student as a urological textbook and contains a good basic clinical approach to urology. It does, however, state that the continuing advances in the field of urology, in particular those concerning diagnostic methods and specific therapeutic agents, have made a revision necessary. It is not clear to this reviewer that any of these matters have been included. In fact, it is hopelessly short on any improvements regarding renal physiology and techniques for evaluation of renal status as well as other essential laboratory procedures. In many important areas there is a dangerous lack of information.

For instance, acute and chronic pyelonephritis is described as "conditions giving rather pronounced symptoms" yet the most dangerous type constitutes approximately fifty percent of the cases giving no symptoms whatever. Likewise, the recommendation of a high fluid intake consisting of liquids or semisolid food is an invention secondary to the first insoluble sulfa drugs. The actual therapy of acute pyelonephritis in this respect still remains to be solved. Yet the importance of a neglected or inadequately treated case is grossly ignored.

Apart from the weaknesses referred to, there are obviously a number of very valuable sections which can act as good orientation for the student. In general, however, it is this reviewer's feeling that this book is out-dated and that the revisions made have not, by any means, brought it up to date.

J. U. SCHLEGEL, M. D.

Essentials of Pediatric Psychiatry; by Reuben Meyer, M. D., Morton Levitt, Ph.D., Mordecai Falick, M. D., and Ben O. Rubenstein, Ph.D., New York, Appleton-Century-Crofts (Division of Meredith Publishing Company) 1962. 208 p. $6.00.

This is the contribution of members of the Wayne University College of Medicine from the departments of Pediatrics and Psychiatry. It is a slim volume purporting to clarify for the Pediatrician his role in the diagnosis and treatment of emotional problems of children rising early in development and later. This is a commendable goal. A volume accomplishing this is much needed.

The title of the book would more nearly alert the reader to its contents if it were called "Essentials of *Psychoanalytic* Pediatric Psychiatry." For understanding and acceptance of the viewpoint of this book the pediatrician would need to be well acquainted with the "libido theory." This is usually not a widely understood and accepted frame of reference for pediatricians and one need not argue here whether it should be. For those so oriented there is much good material. The authors wisely decided not to discuss all the emotional problems one might encounter in Pediatrics. The chapter on "Emotional Reactions to Trauma and Hospitalization" this reviewer found to be the best. The sections dealing with learning problems, school phobia also deserve special mention.

NINA LIEF, M. D.

PUBLICATIONS RECEIVED

Grune & Stratton, N. Y.: Ophthalmic Plastic Surgery, by Sidney A. Fox, M. D. (3rd edit.).

Lea & Febiger, Phila.: A Primer of Cardiology, by George E. Burch, M. D. (3rd edit.).

Office of the Surgeon General, Department of the Army, Washington, D. C.: Surgery in World War II, Thoracic Surgery, Volume I, prepared and published under the direction of Lt. Gen. Leonard D. Heaton, The Surgeon General, U. S. Army.

W. B. Saunders Co., Phila.: The Management of the Anxious Patient, by Ainslie Meares, M. D.; Counseling in Medical Genetics, by Sheldon C. Reed, Ph.D. (2nd edit.); Modern Clinical Psychiatry, by Arthur P. Noyes, M. D. and Lawrence C. Kolb, M. D. (6th edit.).

Charles C Thomas, Publisher, Springfield, Ill.: Living with Epileptic Seizures, by Samuel Livingston, M. D., assisted by Irving M. Pruce, B. S.

Sustained high-level protection in peptic ulcer



SEARLE all day

SEARLE all night

with b.i.d. dosage

PRO-BANTHĪNE P.A.®

Brand of PROPANTHELINE Bromide

Prolonged-Acting Tablets—30 mg.

Pro-Banthīne P.A. provides the full anticholinergic benefit of Pro-Banthīne® plus the greater convenience and more consistent therapeutic effect of a long-acting dosage form.

Asher[1] has summarized the advantages of prolonged-action dosage forms: "First, they should be of great value in the suppression of night acid secretion in the ulcer patient. Also, in the ulcer patient, with high acid secretion during the day these drugs should be of help when used with regular doses of shorter-acting anticholinergic agents. A third application is in the chronic treatment of certain patients whose tendency to recurrent ulcer has been established."

Pro-Banthīne P.A. offers consistent, sustained anticholinergic effects for more consistent suppression of acid secretion and motility on simple twice or thrice daily dosage in most patients.

G.D. SEARLE & CO.
CHICAGO 80, ILLINOIS
Research in the Service of Medicine

Suggested Adult Dosage:
One tablet at bedtime and one in the morning, supplemented, if necessary, by additional tablets of Pro-Banthīne P.A. or standard Pro-Banthīne to meet individual requirements.

Pro-Banthīne P.A.
is supplied as capsule-shaped, peach-colored tablets of 30 mg. each.

Contraindications:
Glaucoma; severe cardiac disease.

Possible Side Actions:
Xerostomia, mydriasis and, occasionally, hesitancy in urination. Theoretically, a curare-like action may occur.

1. Asher, L. M.: The Choice of Anticholinergic Drugs in the Treatment of Functional Digestive Diseases, Amer. J. Dig. Dis. 4:260-275 (April) 1959.

Is there a need for a purely bacteriostatic enteric compound?

— that would go straight to the basis of most intestinal infections.

— that could be employed in the treatment of non-specific ulcerative colitis.

— that would prepare the intestine for operation.

— that would reduce the number of E. Coli and Clostridia in the intestine.

If you agree that there is just such a need, then you'll appreciate the capabilities of:

INTESTOL

TABLETS & SUSPENSION FOR INFANTS, CHILDREN, AND ADULTS

CAUTIONS AND SIDE EFFECTS:

Succinylsulfathiazole and phthalyl-sulfathiazole are absorbed only to a slight extent from the intestine. As a consequence many of the cautions and side effects of the systemic use of sulfonamides do not apply to the same extent. Renal complications are very unlikely and other toxic and allergic side effects of sulfa therapy are quite rare. Nevertheless, the preparation should be used with caution in patients exquisitely sensitive to the sulfa drugs.

COMPOSITION:

Each tablet and each 5cc (Average teaspoonful) contains —

SUCCINYL-SULFATHIAZOLE . . 0.25 Gms.

PHTHALYL-SULFATHIAZOLE . . 0.25 Gms.

SUPPLIED:

INTESTOL tablets in bottles of 100 and 1,000

INTESTOL Suspension in pints only.

Another established need product

FTP **First Texas** *Pharmaceuticals, Inc.*

DALLAS • ATLANTA • SINCE 1901

Question:

"What is a tranquilaxant?"

Answer:

"A drug that is both a tranquilizer and a muscle relaxant."

TRANCOPAL®
brand of
chlormezanone
is a tranquilaxant

As a tranquilizer, TRANCOPAL (chlormezanone/Winthrop) "is effective in the symptomatic treatment of anxiety."[1] Its tranquilizing properties are similar to those of other mild tranquilizers.[1] Furthermore, it relieves tension of both mind and muscle without interfering with normal activity or alertness.

The muscle relaxant properties[2] of this drug provide an extra dimension of effectiveness...relaxing the spasm which so frequently accompanies psychogenic disorders. Hence, the total therapeutic effect of TRANCOPAL (chlormezanone/Winthrop)—a true "tranquilaxant"—is to produce a relaxed mind in a relaxed body.

Unsurpassed Tolerance: Less than 3 per cent of patients develop side effects with TRANCOPAL (chlormezanone/Winthrop), such as occasional drowsiness, dizziness, flushing, nausea, depression, weakness and drug rash. If severe, medication should be discontinued. In most patients, however, side effects are minor and do not necessitate interruption of treatment. There are no known contraindications.

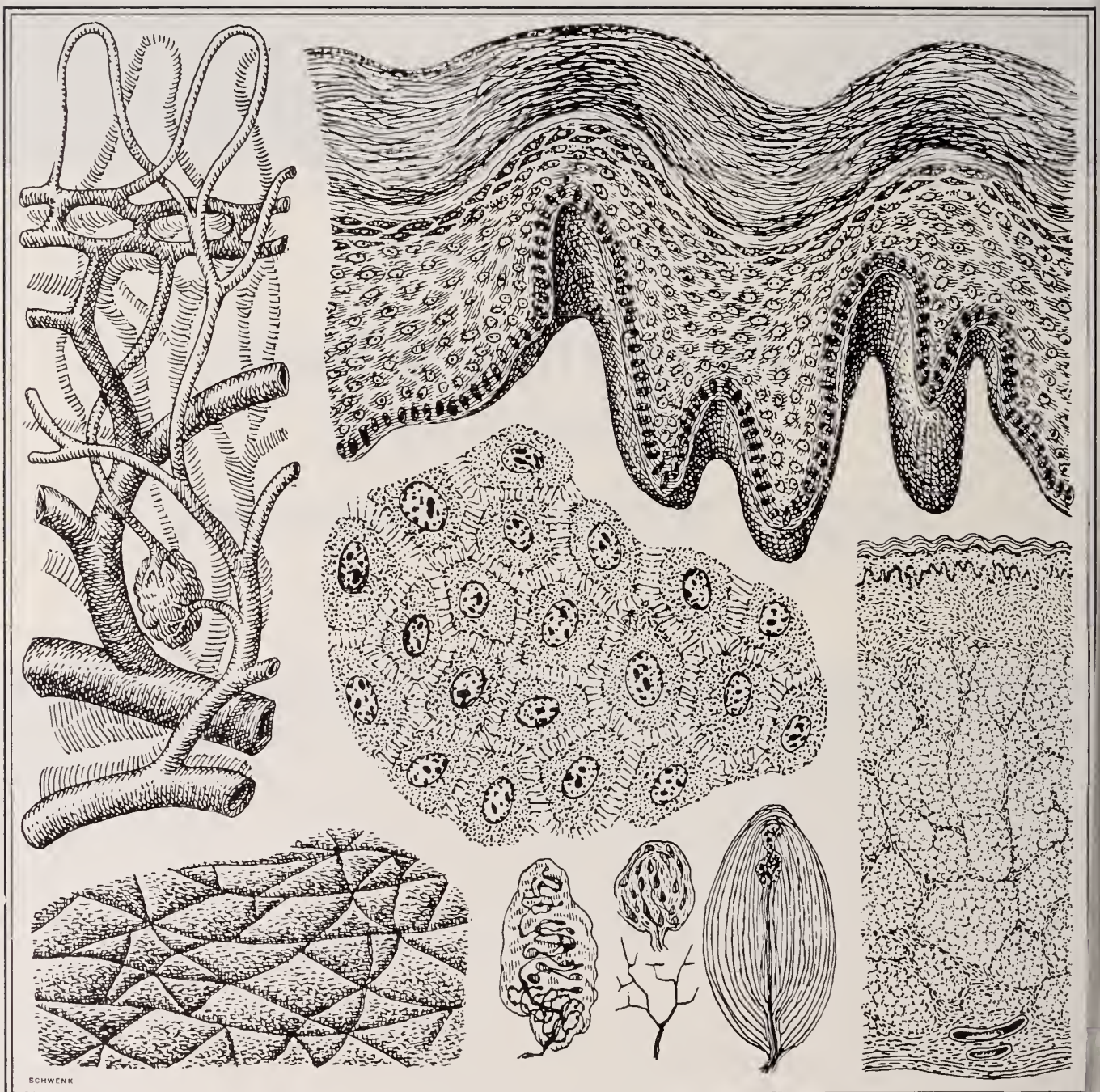
Available: 200 mg. Caplets® (green colored, scored), 100 mg. Caplets (peach colored, scored), each in bottles of 100.

Dosage: Adults, 1 Caplet (200 mg.) three or four times daily; in some patients 100 mg. three or four times daily suffices. Children (5 to 12 years), from 50 to 100 mg. three or four times daily.

Winthrop
WINTHROP LABORATORIES
New York 18, N.Y.

References: 1. A.M.A. Council on Drugs: J.A.M.A. 183:469 (Feb. 9) 1963. 2. Gruenberg, F.: Curr. Ther. Res. 2:1 (Jan.) 1960.

1789M


SCHWENK

Skin Deep

Allergic and inflammatory dermatoses, including psoriasis, have in many patients shown dramatic response to ARISTOCORT Triamcinolone systemic therapy. But it also provides gratifying symptomatic control with only minimal interference with other metabolic functions. In this respect, ARISTOCORT Triamcinolone, when compared with other corticosteroids, old and new, is distinguished. Typical steroid problems of sodium retention and edema, undesirable euphoria, or voracious appetite and excessive weight gain rarely occur.

ARISTOCORT Triamcinolone is indicated when anti-inflammatory, anti-allergic action of glucocorticoids is desired. SIDE EFFECTS of glucocorticoids generally: Cushingoid effects, hirsutism, leucopenia, purpura, vertigo, fatigue, increased hyperglycemia, osteoporosis, gastrointestinal hemorrhage, cataracts, growth suppression in children and increased intracranial pressure. Other glucocorticoid effects thought more likely to occur with triamcinolone: reversible weakness of muscles and flushing of face.

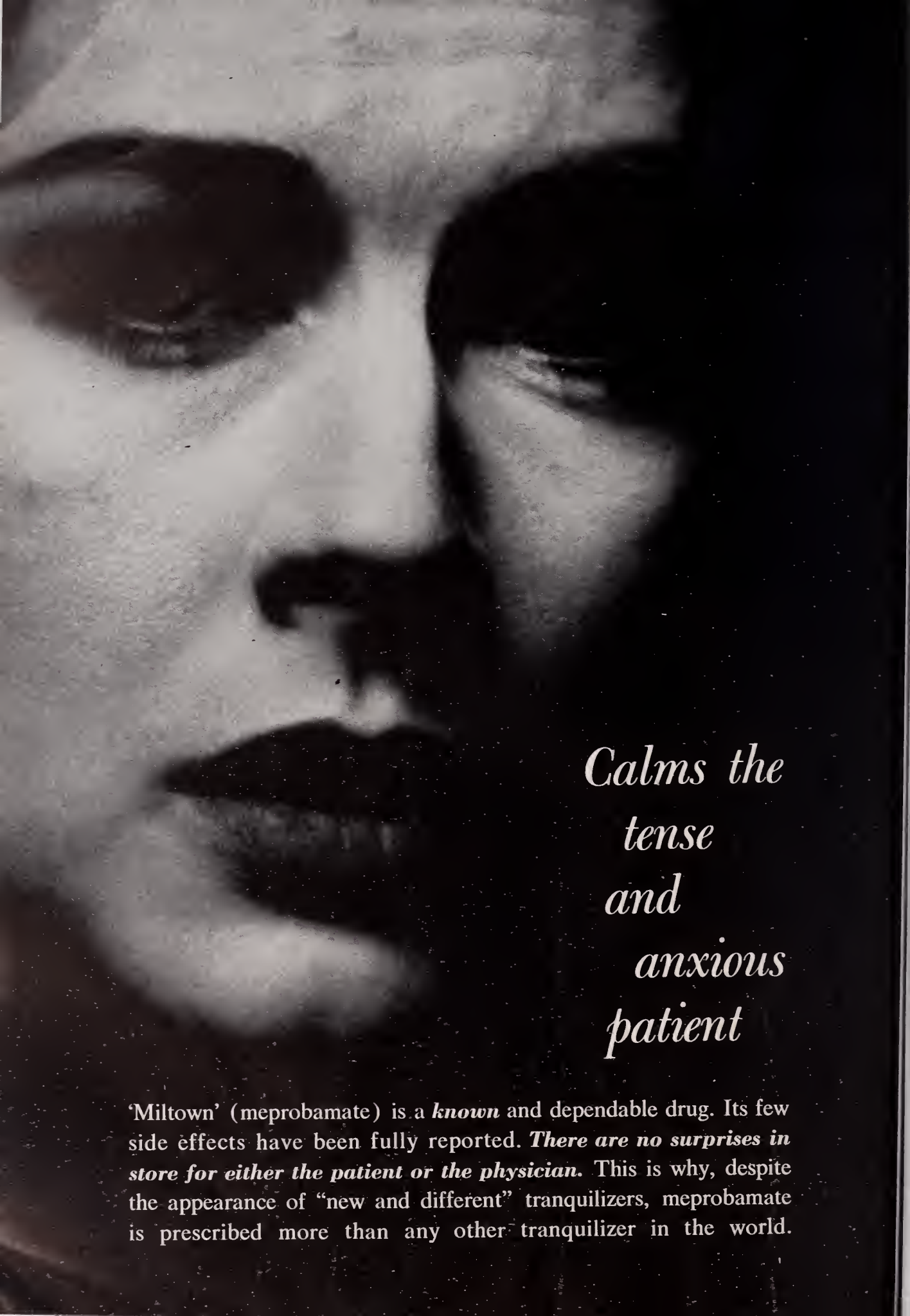
PRECAUTIONS: ARISTOCORT Triamcinolone should be used with extreme caution in viral infection, particularly herpes simplex and chicken pox, in tubercular or fungal infection, in active peptic ulcer, acute glomerular nephritis or myasthenia gravis.

FORMULA—Tablets (scored) containing 1 mg., 2 mg. or 4 mg. of triamcinolone. Syrup — 2 mg. of triamcinolone diacetate per 5 cc. (5 mg. of triamcinolone diacetate is equivalent to 4 mg. of triamcinolone).

Aristocort®
Triamcinolone

Maximum steroid benefits with minimum steroid penalty

Lederle LEDERLE LABORATORIES • A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York
164-R-3 (DC31-S)



'Miltown' (meprobamate) is a ***known*** and dependable drug. Its few side effects have been fully reported. ***There are no surprises in store for either the patient or the physician.*** This is why, despite the appearance of "new and different" tranquilizers, meprobamate is prescribed more than any other tranquilizer in the world.

Clinically Proven

in more than 750 published clinical studies and over eight years of clinical use

Outstanding Record of Effectiveness and Safety

1. Relieves anxiety and anxious depression in a broad spectrum of clinical conditions.
2. Doesn't leave patients "too groggy" to work or think or learn.
3. Relaxes both mind and skeletal muscle. Relieves physical tension as well as emotional stress.

Product Information: 'Miltown' (meprobamate) is indicated in anxiety and tension states, and all conditions in which anxiety and tension are symptoms; in muscle spasm or tension; and in petit mal.

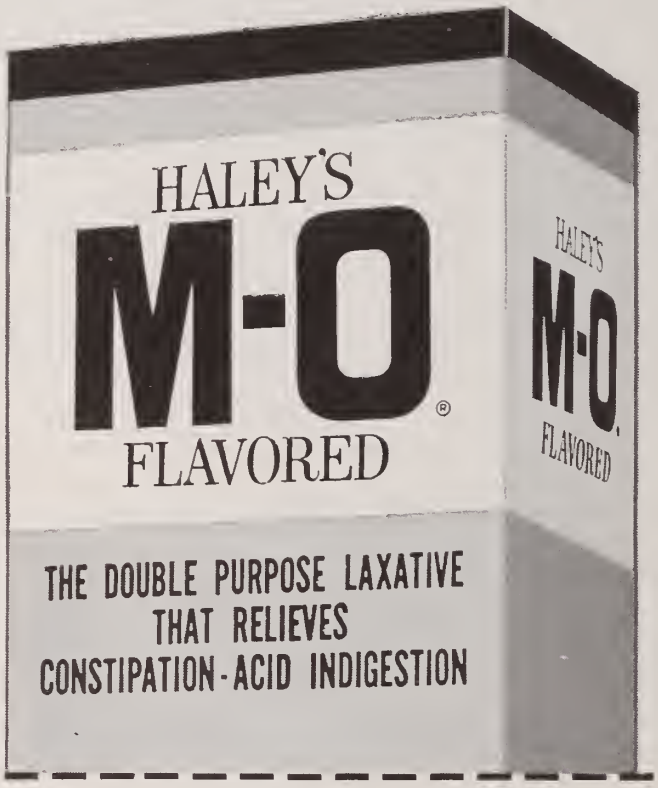
Slight drowsiness may occur with meprobamate and, rarely, allergic reactions. Meprobamate may increase effects of excessive alcohol. Use with care in patients with suicidal tendencies. Massive overdosage may produce coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Withdraw gradually after prolonged use at high dosage.

Usual dosage: 1 or 2 400 mg. tablets t.i.d. **Supplied:** 400 mg. scored tablets, 200 mg. sugar-coated tablets; bottles of 50.

Miltown®
meprobamate

WALLACE LABORATORIES / *Cranbury, N. J.*

NOW ALSO IN FLAVORED FORM!



BOTTLES OF
4 OZ., 8 OZ.,
1 PT., 1 QT.

Antacid–Laxative–Lubricant to help correct constipation

Magnesium Hydroxide plus pure mineral oil make *Haley's M-O* a smooth working antacid-laxative-lubricant that efficaciously relieves constipation and attendant gastric hyperacidity.

The oil globules in *Haley's M-O* are minutely subdivided to assure uniform distribution and thorough mixture with intestinal contents. Oil leakage is thus avoided and a comfortable evacuation is effected through the stimulation of normal intestinal rhythm and blunted defecation reflex.

May we send samples for your evaluation? Just write:

THE CHAS. H. PHILLIPS CO.

Division of Sterling Drug Inc., 1450 Broadway, New York 18, N. Y.

Hungry for flavor? Tareyton's got it!



Flavor you never thought you'd get from any filter cigarette!

You'll never know how satisfying filter smoking can be until you try Tareytons. Fine, flavor-rich tobaccos go into each Tareyton. Then the famous Dual Filter brings out the best taste of these choice tobaccos. Sound too good to be true? Pick up a pack of Tareytons today and see for yourself.



DUAL FILTER Tareyton

Product of The American Tobacco Company — "Tobacco is our middle name"

Trocinate®

Brand of Thiphenamil HCl.

FOR DIVERTICULITIS, MUCUS COLITIS,

IRRITATIVE DIARRHEA, IRRITATIVE URETERITIS,

BLADDER SPASM

*T*rocinate is a musculotropic antispasmodic with no appreciable anticholinergic action. It relieves spasms of the lower bowel and genito-urinary tract by direct action on the contractile mechanism of smooth muscles. The absence of any appreciable action on the autonomic nervous system eliminates the usual side-effects. It may be safely used in glaucoma. Each tablet contains 100 mgs. Trocinate HCl.

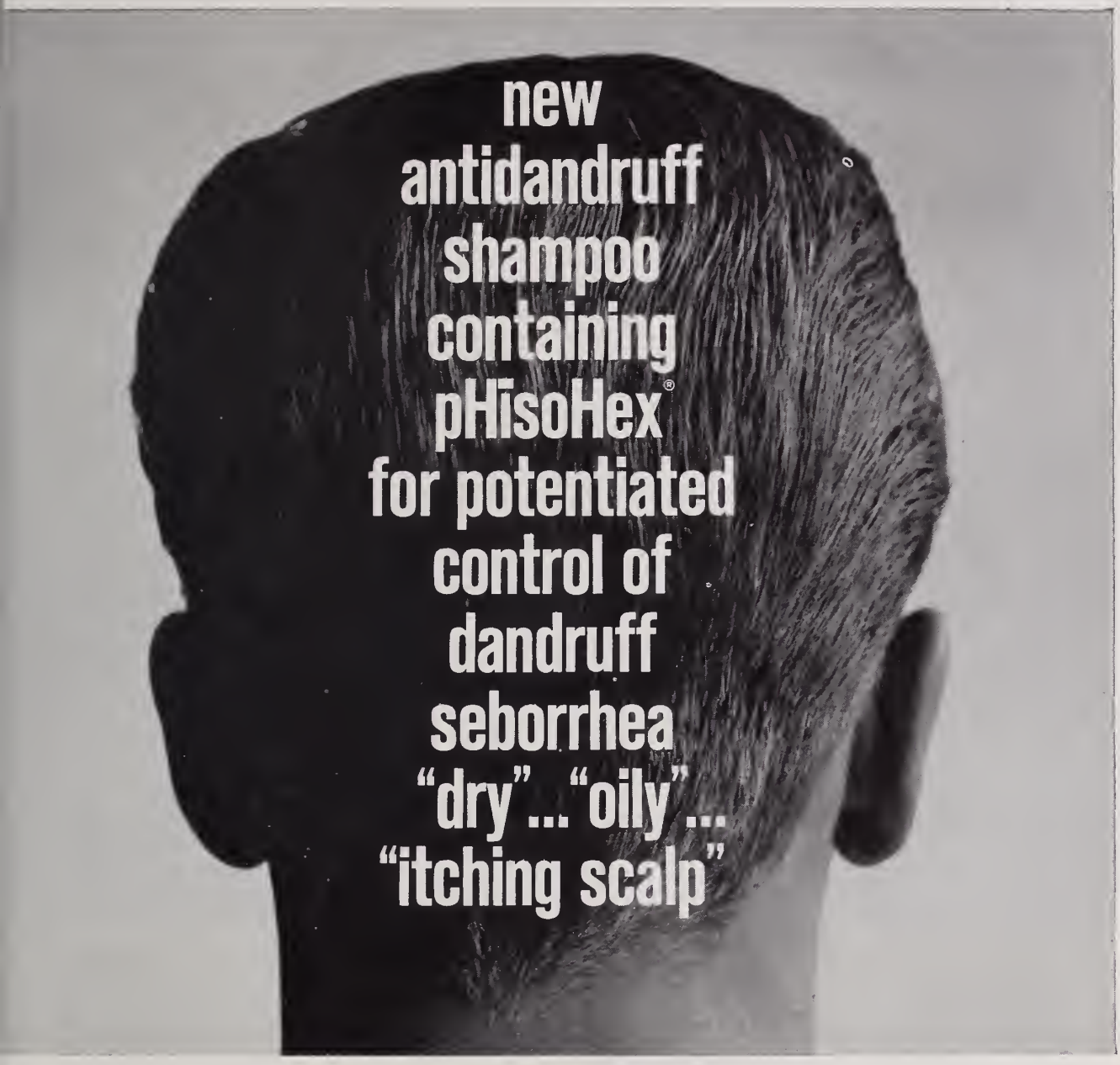
USUAL DOSAGE: 2 tablets, 4 times a day. Maintenance dosage is frequently lower.

Dispensed in bottles of 40 and 250 tablets.

WM. P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA

Manufacturers of ethical pharmaceuticals since 1856

pHisoDan*



New pHisoDan provides the exceptionally beneficial antibacterial and the powerfully detergent actions of pHisoHex (with hexachlorophene 3%) combined with the penetrating, keratolytic and fungicidal actions of a specially prepared dermatologic sulfur (5%) and sodium salicylate (0.5%). By a multiple therapeutic approach, pHisoDan quickly eliminates dandruff, seborrheic scales, excessive oiliness or dryness and itching of the scalp. Because pHisoDan contains pHisoHex, it cleans hair thoroughly and keeps the scalp freer of bacteria. It is also valuable in folliculitis, pyodermas and pustular eruptions of the scalp. In 1062 patients with seborrhea of the scalp (both sicca and oleosa), treated by 86 dermatologists, excellent or good results were obtained with pHisoDan in more than 90%.† Mild, gentle and with a pH adjusted to that of the skin, pHisoDan is nontoxic and nonirritating when used as directed. It does not stain or sting. pHisoDan should be used two or three times weekly until improvement is noted, thereafter once a week or as needed.

Available in 4¾ oz. squeeze bottles. Consult Winthrop literature for additional information.

*Trademark †Data in the files of Research Department, Sterling Winthrop Institute

pHisoHex, trademark-reg. U.S. Pat. Off.

WINTHROP LABORATORIES, NEW YORK 18, N. Y.

Winthrop

Browne-McHardy Clinics

MAIN CLINIC
3636 St. Charles Ave.
New Orleans 15, La.
TWinbrook 9-2376

GRAVIER ST. DIVISION
630 Gravier St.
New Orleans 12, La.
524-1605

VETERANS HIGHWAY DIVISION
8601 Veterans Memorial Hwy.
Metairie, La.
VErnon 3-7341

INTERNAL MEDICINE
Cardiology
Endocrinology
Gastroenterology
Hematology
Rheumatology

Donovan C. Browne, M. D.
Wiley H. Jenkins, M. D.
Robert C. Judice, M. D.
John T. Leckert, M. D.
G. Gordon McHardy, M. D.
Robert J. McHardy, M. D.
Swan S. Ward, M. D.
George E. Welch, M. D.
Guy T. Williams, M. D.

DERMATOLOGY
William Burroughs, M. D.

DISEASES OF THE CHEST
Joseph E. Blum, Jr., M. D.

EAR, NOSE and THROAT
Norma Kearby, M. D.

GENERAL SURGERY
Claude C. Craighead, M. D.
Raul G. Reyes, M. D.

OBSTETRICS and GYNECOLOGY
C. Gordon Johnson, M. D.
Robert I. Ayerst, M. D.
James M. Todd, Jr., M. D.

OPHTHALMOLOGY
Oliver H. Dabezies, M. D.

INDUSTRIAL MEDICINE
Ralph J. McDonough, M. D.
Albert W. Auld, M. D.

PEDIATRICS
Carl E. Kemmerly, M. D.
Milton H. Donaldson, M. D.

RADIOLOGY and RADIOTHERAPY
Charles O'Dowd Lilly, M. D.
Joseph B. Marino, M. D.
Walter McDowell, M. D.

UROLOGY
John F. Lally, M. D.

AUXILIARY SERVICES
Cytology
Diabetics
Electroencephalograph
Endoscopy
Medical Laboratory
Pharmacy
Physical Therapy
Pulmonary Function Studies

from *Curity*

A big aseptic advance in a tiny new package!

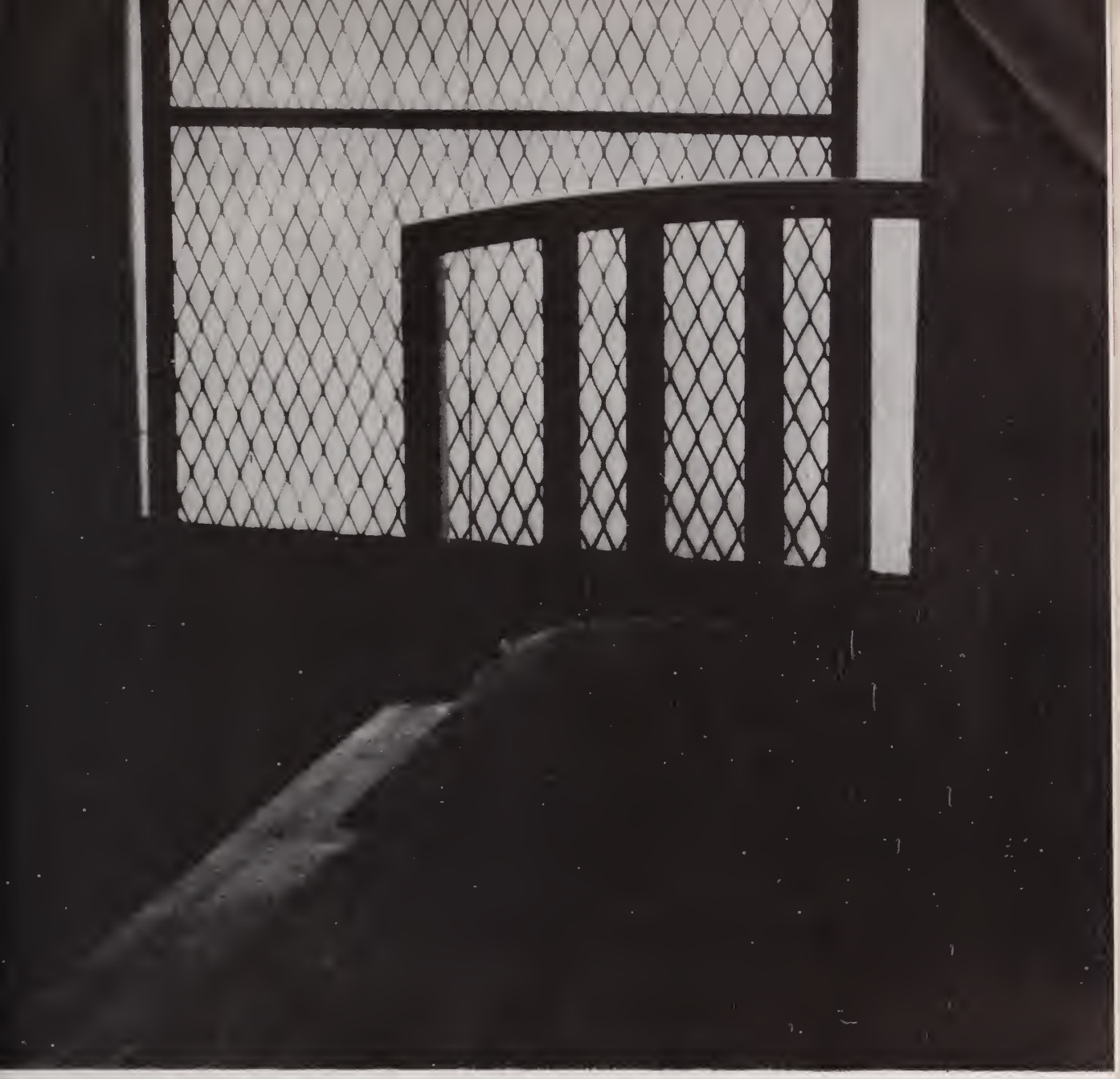
The New WEBCOL Alcohol Preps

Sterile — ethylene oxide kills alcohol resistant spores.

Convenient — ready for instant use.

Economical — no waste from evaporation, no dripping from excess saturation.

PEACOCK
SURGICAL COMPANY INC.
1235 TEXAS AVENUE
SHREVEPORT, LOUISIANA



vacancy

"The direct cost for caring for the mentally ill is $1,7 billion a year. Workers who become mentally ill lose over half a billion dollars in earnings each year.

*Staff in one mental hospital recently tried an experiment with 65 patients who had been confined for an average of 13 years. They practiced the best treatment methods now known and, within six months to a year, 37 of these patients were well enough to be discharged. Only eight of the discharged patients failed to hold the gains they had made for at least a year after they left the hospital."**

Hope now, where there was no hope. Drugs which help now, where there were no known drugs which helped—even five years ago. Independent drug research is continuing in this vital area. But, should it be discontinued because the cost must somehow be reflected in the ultimate price of the new drug—if it is to be discovered? Or should the sign read, as it has throughout time in overcrowded mental institutions: "NO VACANCIES."

*U.S. Department of Health, Education and Welfare, Public Health Service Publication No. 813.

This message is brought to you on behalf of the producers of prescription products.

PHARMACEUTICAL MANUFACTURERS ASSOCIATION • 1411 K STREET, N.W. • WASHINGTON, D.C.

Lifts depression..



"I feel like my old self again!" Thanks to your balanced therapy with 'Deprol', her depression has lifted and her mood has brightened – while her anxiety and tension have been calmed. She sleeps better, eats better, and normal drive and interest have replaced her emotional fatigue.

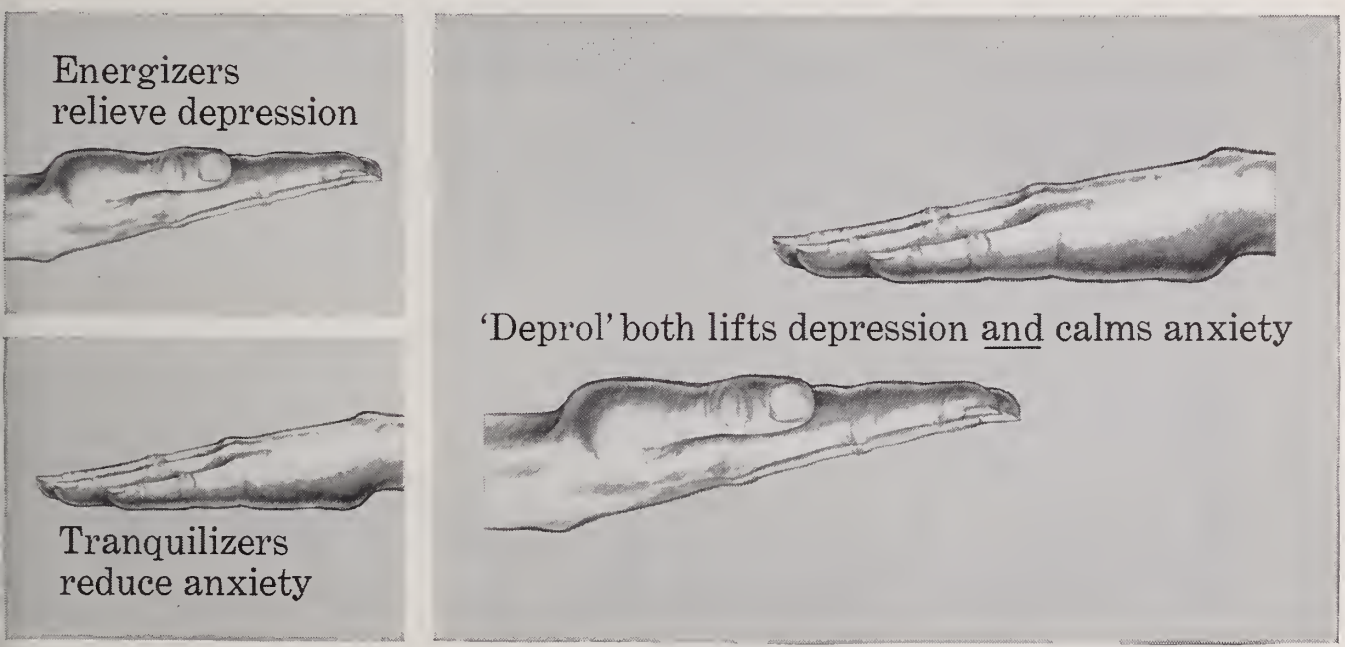
as it calms anxiety

Brightens mood...relaxes tension

Energizers may stimulate the depressed patient, but they often aggravate anxiety and insomnia. Tranquilizers may help the anxious patient, but they often deepen depression and emotional fatigue.

'Deprol' avoids these "seesaw" effects; it relieves both depression and anxiety. Moreover, it does not cause liver damage, psychotic reactions or changes in sexual function.

Product Information: 'Deprol' is indicated for depression, especially when accompanied by anxiety, tension, agitation, rumination or insomnia. Slight drowsiness and, rarely, allergic reactions, due to meprobamate; and occasional dizziness or feeling of depersonalization in higher dosage, due to benactyzine, may occur. Meprobamate may increase effects of excessive alcohol. Use with care in patients with suicidal tendencies. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Withdraw gradually after prolonged use at high dosage.



Usual Dosage: 1 tablet q.i.d. May be increased gradually, as needed, to 3 tablets q.i.d.; with establishment of relief, may be reduced gradually to maintenance levels.

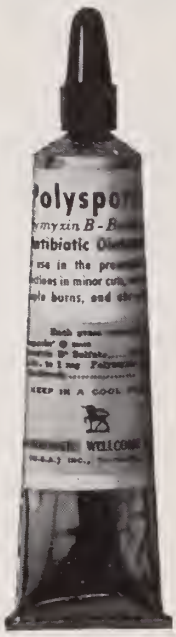
▲Deprol▲®

meprobamate 400 mg.
+ benactyzine 1 mg.

WALLACE LABORATORIES / *Cranbury, N.J.*

CD-9213

in treating topical infections, no need to sensitize the patient



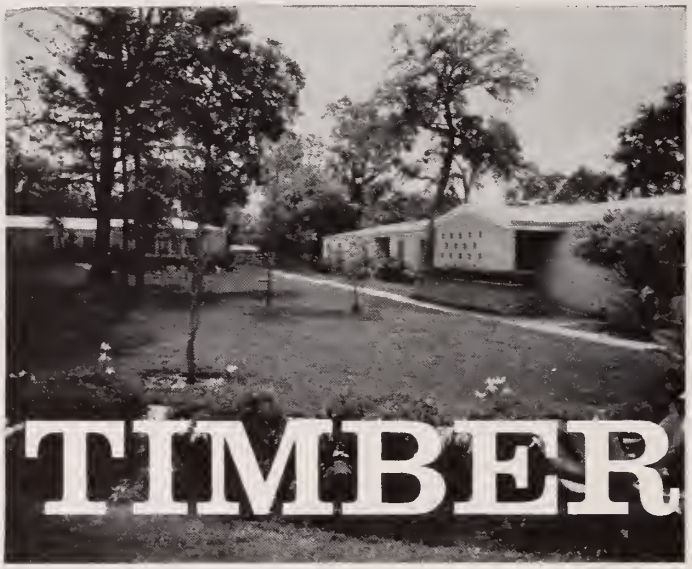
USE 'POLYSPORIN'® brand POLYMYXIN B-BACITRACIN ANTIBIOTIC OINTMENT

broad-spectrum antibiotic therapy with minimum risk of sensitization

Caution: As with other antibiotic products, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **Supplied:** in ½ oz. and 1 oz. tubes.

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.



PSYCHIATRIC HOSPITAL

DAY HOSPITAL

DEPARTMENT OF OUT PATIENT PSYCHIATRY

TIMBERLAWN FOUNDATION
For Education and Research in Psychiatry

Narcotic Cases Not Admitted

TIMBERLAWN
PSYCHIATRIC CENTER

PERRY C. TALKINGTON, M.D.
Psychiatrist In Chief

CHARLES L. BLOSS, M.D.
Medical Director

HOWARD M. BURKETT, M.D.
Clinical Director

DONALD BERTOCH, M.A.
DAVID LIPSHER, Ph.D.
JEAN HUBBARD, B.S.
Clinical Psychology

Associate Psychiatrists
JAMES K. PEDEN, M.D.
WARD G. DIXON, M.D.
JERRY M. LEWIS, M.D.
CLAUDE L. JACKSON, M.D.
E. CLAY GRIFFITH, M.D.
BELVIN A. SIMMONS, M.D.
ALBERT F. RIEDEL, M.D.
JOHN HENRY REITMAN, M.D.

Business Manager
RALPH M. BARNETTE, JR., B.B.A.

BILL M. TURNAGE, M.S.S.W.
ROBERT L. COATES, M.S.S.W.
WELDON EBELING, M.S.S.W.
Social Work

GERALDINE SKINNER, B.S., O.T.R.
Director of Occupational Therapy

LOIS TIMMINS, Ed.D.
Director of Recreational Therapy

FRANCES LUMPKIN, R.N., B.S.
Director of Nurses

EVergreen 1-2121

Dallas 21, Texas

P. O. Box 1769

FOR YOUR *Patients'* HEALTH...
COME TO



AMERICAN MEDICAL ASSOCIATION

112TH ANNUAL MEETING

JUNE 16 - 20

Along Atlantic City's famed seaside boardwalk, take the big step toward a complete medical "refresher."

The world's foremost investigative talent—latest advances in general practice—newest tools and techniques—hundreds of topflight exhibits—all in one compact, comprehensive five-day session—**to help you bring to your patients the best that medicine has to offer.**

It's all in Atlantic City—and it's all for YOU!

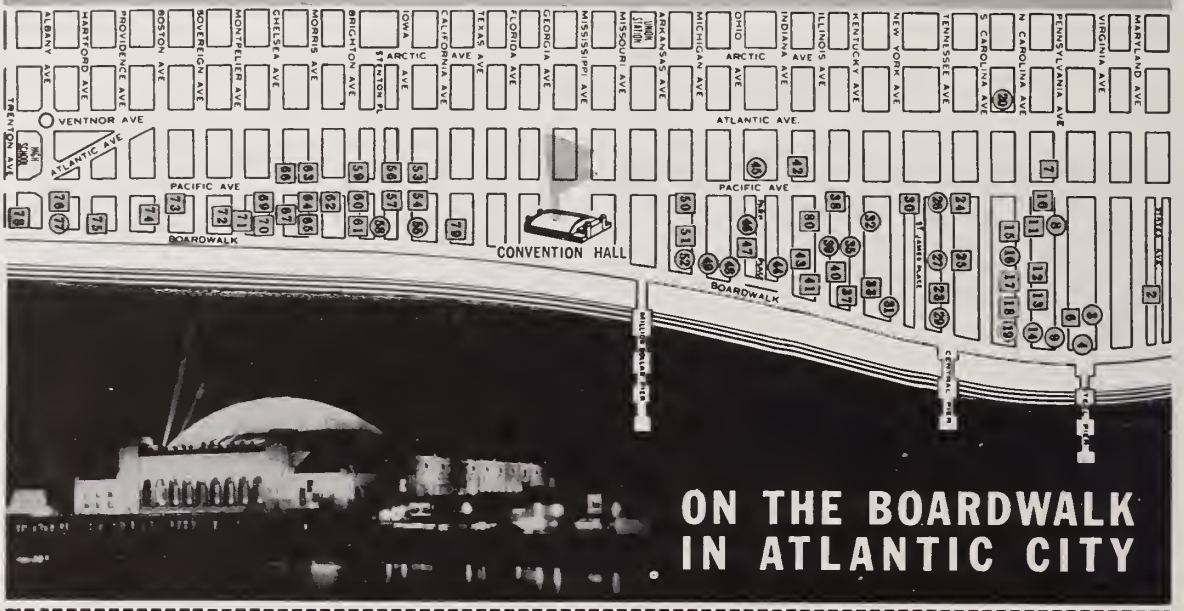
See JAMA May 4 for complete scientific program, hotel accommodations and advance registration forms

AMERICAN MEDICAL ASSOCIATION / 535 N. DEARBORN ST. / CHICAGO 10, ILL.

AMA 112TH ANNUAL MEETING

JUNE 16-20

Atlantic City's fine resort accommodations has superb recreational facilities and all hotels and motels are convenient to the newly remodeled Convention Hall on the ocean front. Plan now to attend and save time by sending in these coupons for room reservations and advance registration for the AMA Annual Meeting.



PLEASE FILL IN COUPON BELOW and RETURN DIRECTLY TO

AMA Housing Bureau c/o Atlantic City Convention Bureau
16 Central Pier, Atlantic City, New Jersey

CUT HERE

FOR ROOM RESERVATIONS

Please print or type six choices of Hotels or Motels:

1st_____ 2nd_____

3rd_____ 4th_____

5th_____ 6th_____

Please enter my reservation at the above hotel for ☐ single ☐ double ☐ twin ☐ suite at $_____

Date Arriving_____ hour_____ a.m._____ p.m._____ Leaving_____

Room will be occupied by:

NAME STREET ADDRESS CITY ZONE STATE

Additional Occupants:_____

Please attach list of additional names if you do not have sufficient space here. Also list ages of children, if any.

If you are an industrial exhibitor, be sure to give name of firm and individuals to occupy room or rooms reserved. Please make all changes and cancellations through the Housing Bureau. Hotel reservations will be held only until 6:00 p.m. unless otherwise specified.

ATLANTIC CITY HOTEL-MOTEL ACCOMMODATIONS

HOTELS ○ MOTELS □

MAP NO.	BOARDWALK HOTELS	SINGLES	DOUBLES	TWINS
9	ABBEY	8.00-12.00	12.00	14.00-16.00
58	AMBASSADOR*	8.00-20.00	_____	10.00-22.00
14	CHALFONTE-HADDON HALL* (Woman's Auxiliary Headquarters)	8.00-12.00	_____	11.00-30.00
44	CLARIDGE	10.00-21.00	_____	14.00-25.00
61	DEAUVILLE	14.00-18.00	_____	16.00-24.00
49	DENNIS*	9.00-14.00	_____	12.00-24.00
48	MARLBOROUGH-BLENHEIM	(OCEAN WING ONLY)		22.00
29	MAYFLOWER*	10.00-12.00	12.00	12.00-18.00
77	PRESIDENT	8.00-15.00	_____	11.00-18.00
55	RITZ-CARLTON*	8.00-20.00	_____	10.00-20.00
4	SEASIDE*	12.00	_____	14.00-22.00
52	SHELBURNE*	10.00-14.00	_____	12.00-24.00

MAP NO.	OFF-BOARDWALK HOTELS	SINGLES	DOUBLES	TWINS
41	TRAYMORE (HEADQUARTERS)	(NO ROOMS AVAILABLE)		
16	CAROLINA CREST	7.00- 8.00	9.00	10.00-12.00
8	COLTON MANOR*	9.00-15.00	_____	14.00-20.00
26	COLUMBUS*	_____	10.00	10.00
45	EASTBOURNE*	7.00- 9.00	10.00	11.00
27	FLANDERS*	6.00- 7.00	8.00- 9.00	10.00-14.00
35	JEFFERSON*	7.00- 8.00	10.00	10.00-12.00
31	LEXINGTON*	7.00- 8.00	8.00-11.00	9.00-11.00
39	MADISON*	6.00- 8.00	8.00-10.00	8.00-16.00
3	MORTON*	8.00-10.00	11.00-12.00	12.00-15.00
20	PENN-ATLANTIC*	7.00	10.00-12.00	10.00-12.00
32	RICHFIELD-BOSCOBEL*	4.00- 6.00	6.00- 8.00	6.00- 8.00
46	RUNNYMEDE*	7.00-10.00	10.00-12.00	8.00-12.00

▼ MOTEL-TYPE ACCOMMODATIONS ▼

MAP NO.		SINGLES	DOUBLES	TWINS
33	ACAPULCO*	12.00	14.00	16.00
62	ALGIERS	14.00	_____	18.00-20.00
71	ALOHA	_____	_____	14.00-22.00
54	ASCOT*	12.00-14.00	_____	14.00-20.00
80	BALA	16.00	_____	18.00-22.00
12	BARCLAY	_____	_____	20.00-28.00
63	BARONET	_____	16.00	14.00-16.00
17	BURGUNDY	12.00-14.00	_____	14.00-20.00
79	CALIFORNIAN	12.00-14.00	_____	14.00-20.00
69	CARIBE	10.00-12.00	12.00	14.00-18.00
15	CAROLINA CREST	_____	12.00	14.00-16.00
64	CASTLE ROC	14.00	_____	16.00-20.00
18	CATALINA	16.00	_____	18.00-24.00
43	COLONY (HEADQUARTERS)	(NO ROOMS AVAILABLE)		
40	CONTINENTAL	12.00	_____	14.00-18.00
13	CORONET	12.00-14.00	_____	14.00-20.00
10	CROWN*	14.00	16.00	18.00
60	DEAUVILLE	16.00-20.00	_____	18.00-26.00
57	DIPLOMAT	10.00-12.00	_____	14.00-20.00
59	DUNES	14.00	_____	16.00-20.00
42	EASTBOURNE	_____	_____	16.00-20.00
53	ELDORADO	_____	_____	14.00-18.00
51	EMPRESS	10.00-12.00	_____	12.00-24.00

MAP NO.		SINGLES	DOUBLES	TWINS
30	ENVOY	14.00-16.00	16.00-22.00	_____
24	FIESTA	14.00-16.00	_____	16.00-22.00
56	GALAXIE	_____	18.00	20.00
70	LA CONCHA	12.00	16.00	18.00-24.00
11	LAFAYETTE MOTOR INN*	8.00-20.00	10.00-16.00	12.00-24.00
78	LINCOLN-ROOSEVELT*	12.00-15.00	_____	13.00-17.00
37	LOMBARDY	10.00-12.00	_____	12.00-24.00
72	MALIBU	9.00-12.00	_____	14.00-20.00
65	MARDI GRAS	_____	_____	12.00-22.00
66	MARTINIQUE	_____	_____	16.00-18.00
28	MAYFLOWER	12.00-14.00	_____	12.00-18.00
75	MONTE CARLO BEACH	8.00	_____	10.00-15.00
7	MONTEREY	10.00-12.00	_____	14.00-16.00
47	MT. ROYAL	10.00-12.00	_____	12.00-24.00
2	OCEAN VIEW	_____	16.00	16.00
76	PRESIDENT	10.00-17.00	_____	13.00-20.00
50	SAXONY	12.00	_____	14.00-16.00
6	SEASIDE	14.00	_____	16.00-22.00
38	SORRENTO	16.00	_____	18.00-22.00
74	STRAND OF ATLANTIC CITY	9.00-13.00	_____	12.00-16.00
67	TEPLITZKY'S	_____	_____	12.00-16.00
25	TRINIDAD	10.00-14.00	_____	14.00-20.00
73	TROPICANA*	12.00	_____	12.00-18.00

*COMBINATIONS AVAILABLE, TWO ROOMS WITH CONNECTING BATH

TO ASSURE YOUR A.M.A. ACCOMMODATIONS AT THE 112th ANNUAL MEETING FILL IN COUPON BELOW:

RETURN TO

Circulation and Records Dept., AMA
535 North Dearborn Street, Chicago 10, Illinois

CUT HERE

FOR ADVANCE REGISTRATION OF PHYSICIANS

This coupon must be returned before May 28, 1963 to receive your advance registration identification card for Atlantic City. Your card will be sent to you on June 4 unless you request an earlier mailing date.

Name (please print) _____
(each physician must register in his own name)

Address _____
City Zone State

I am a Member of the A.M.A. thru the _____ State Medical Association

or in the following government service: _____

Please check the one section in which you wish to be enrolled:

- ☐ Anesthesiology
- ☐ Dermatology
- ☐ Diseases of the Chest
- ☐ Experimental Medicine and Therapeutics
- ☐ Gastroenterology and Proctology
- ☐ General Practice
- ☐ Internal Medicine
- ☐ Laryngology, Otology and Rhinology
- ☐ Military Medicine
- ☐ Nervous and Mental Diseases
- ☐ Obstetrics and Gynecology
- ☐ Ophthalmology
- ☐ Orthopedic Surgery
- ☐ Pathology and Physiology
- ☐ Pediatrics
- ☐ Physical Medicine
- ☐ Preventive Medicine
- ☐ Radiology
- ☐ Surgery, General
- ☐ Urology
- ☐ Miscellaneous Topics:
 - ☐ Allergy
 - ☐ Maxillofacial Surgery
 - ☐ Iron Deficiency

Invest in the future health of the nation and your profession



Give to medical education through AMA-ERF

To train the doctors of tomorrow, the nation's medical schools must have your help today. It is a physician's unique privilege and responsibility to replenish his own ranks with men educated to the highest possible standards. *Medical education needs your dollars to stay strong. Send your check today!*

AMA-ERF

AMERICAN MEDICAL ASSOCIATION
EDUCATION AND
RESEARCH FOUNDATION

535 North Dearborn St., Chicago 10, Illinois

INDEX TO ADVERTISERS

Abbott Laboratories 10, 11
American Medical Association 33, 34, 35
American Tobacco Company 25
Ames Company, Inc. 12

Browne-McHardy Clinics 28
Burroughs Wellcome & Co. 32

Davies, Rose & Co., Ltd. 7

Endo Laboratories 9

First Texas Pharmaceuticals, Inc. 18

Glenbrook Laboratories 24

Katz & Besthoff, Ltd. 1

Lederle Laboratories 3, 20, 21
Lilly & Company, Eli Front Cover, 16
Louisiana Coca-Cola Bottling Co. 1
Louisiana State Board of Health Second & Third Covers

Majors Company, J. A. 1

Parke, Davis & Company 4, 5
Peacock Surgical Co., Inc. 28
Pharmaceutical Manufacturers Association 29
Poythress & Company, Inc., Wm. P. 6, 26
Professional Cards 37, 38
Professional Management Service 8

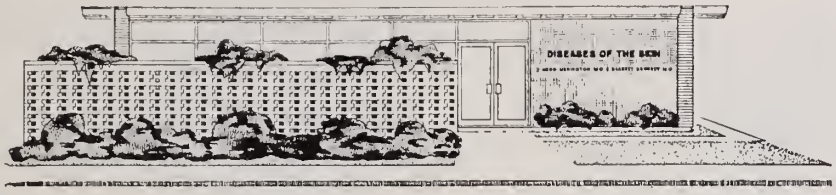
Roche Laboratories Back Cover

Schering Corporation 15
Searle & Company, G. D. 17
Smith Kline & French Laboratories 13
Squibb & Sons, E. R. 2

Timberlawn Psychiatric Center 32

Wallace Laboratories 14, 22, 23, 30, 31
Winthrop Laboratories 19, 27

PROFESSIONAL CARDS



Courtesy Parking

Adjacent to Building

BARRETT KENNEDY, M. D.

V. MEDD HENINGTON, M. D.

WM. J. PERRET, M. D.
(Associate)

DERMATOLOGY

4522 MAGNOLIA STREET

TWinbrook 1-4452 — 1-4453

Green Clinic

709 South Vienna Street — Ruston, Louisiana

Surgery
Marvin T. Green, M.D.
LaMoyne C. Bleich, M.D.

Obstetrics and Gynecology
Carl L. Langford, M.D.
David M. Hall, M.D.

Pediatrics
Bruce W. Everist, M.D.
O. Wharton Brown, Jr., M.D.

Eye, Ear, Nose and Throat
Harold H. Harms, M.D.

Radiology
M. Ragan Green, M. D.

Internal Medicine
Henry S. Roane, M.D.
Robert W. Sharp, M.D.
Joe L. Smith, Jr., M.D.

Dentistry
L. Felton Green, D.D.S.
Benjamin C. Baugh, D.D.

The Baton Rouge Clinic

134 North 19th St. — DI 8-5361

SURGERY
J. Sabatier, M. D.
Charles Mosely, M. D.
Charles S. Peter, Jr., M. D.

GYNECOLOGY & OBSTETRICS
Melvin Schudmak, M. D.
J. P. Griffon, M. D.
Donald C. Diefendorf, M. D.

UROLOGY
Mortimer Silvey, M. D.

GENERAL PRACTICE
Shirley J. Woodford, M. D.

INTERNAL MEDICINE
Charles Prosser, M. D.
Roger Reynolds, M. D.
(Allergy)
Bruce L. Baer, M. D.
(Gastroenterology)
Douglas Gordon, M. D.
(Endocrinology)
David D. Kahn, M. D.
(Hematology)

EYE
George H. Jones, M. D.

PHILIP RONALD LORIA, M. D.

DISEASES OF THE SKIN

Dermoplaning — **Removal of Excessive Hair**

1104 Maison Blanche Bldg. — New Orleans 16, La.
By Appointment — 524-9621

PROFESSIONAL CARDS

JOHN C. HARDIN, JR.
D.D.S., M.D., F.A.C.S.
Maxillo-Facial & Oral Surgery
(Head and Neck Surgery)
121 Physicians & Surgeons Bldg., West
Phone 3-6901 Shreveport, Louisiana

DR. NATHAN H. POLMER
Physical Medicine—Rehabilitation
2209 Carondelet St.
2 - 5 P. M.
Off.: JA 2-0171 Res.: JA 2-3946

JAMES W. BURKS, JR., M. D.
DISEASES OF THE SKIN
SURGICAL PLANING FOR COSMETIC DEFECTS
FACILITIES FOR REMOVAL OF SUPERFLUOUS HAIR
925 Maison Blanche Bldg.
New Orleans 16, La. 529-3322

DR. R. ROSS, JR.
SKIN DISEASES
802 Pere Marquette Bldg. JA 2-0202

DR. RICHARD W. VINCENT
PLASTIC AND RECONSTRUCTIVE SURGERY
34 Maes Court — Medical Plaza
3600 PRYTANIA STREET
TWinbrook 5-4561

JUSTILLIEN H. FORET, M. D.
Practice Limited to Psychiatry
3706 Prytania Street
899-2618 By Appointment

CHARLES I. BLACK, M. D.
DISEASES OF THE SKIN
4550 North Boulevard DIckens 3-2841
Baton Rouge, Louisiana

Business Management Consultants
for Individual Practices, Groups and Clinics
PROFESSIONAL MANAGEMENT SERVICE
700 Maison Blanche Bldg.
524-1177 New Orleans 16, La.

BLAISE SALATICH, D.D.S., M.D.
PRACTICE LIMITED TO ORTHOPEDIC SURGERY
1212 Maison Blanche Building
JAckson 2-7697 By Appointment

THE OWENS CLINIC
for
PLASTIC AND RECONSTRUCTIVE SURGERY
2223 Carondelet St. New Orleans 13, La.
Telephone: JAckson 2-0106
After Hours — Call Doctors' Exchange WH 5-4141

DR. HARTWIG M. ADLER
EYE, EAR, NOSE AND THROAT
Hours by appointment.
3439 Prytania Street TW. 1-4094
New Orleans

DR. CARL N. WAHL
Practice limited to
MAXILLO-FACIAL AND PLASTIC SURGERY
4500 Magnolia Street 891-6615

FRANK H. MAREK, M. D.
Radiologist
444 So. Ryan Street Lake Charles, La.
Phone HE 3-6361
Practice Limited to
X-ray and Radium Treatment and Diagnosis

DR. HARRY ZOLLER
HEARING AND DEAFNESS
DISEASES AND SURGERY OF THE EAR
1109 Pere Marquette Building
JA. 5-2535 By Appointment

JOHN H. COUNCE, M. D.
Diseases of the Skin
1413 Delachaise St. New Orleans
Office Hours
By Appointment TW 1-2813

FREDERIC W. BREWER, M. D.
PRACTICE LIMITED TO PSYCHIATRY
1008 Maison Blanche Building
JA 5-4047 By Appointment

The Cancer Commission of the Louisiana State Medical Society



BREAST CANCER will strike one of every twenty women in the United States. At present rates, less than half of them will be cured.

Breast cancer is a disease of immense frustration for the physician... and is one of woman's deepest fears. Yet, for the individual patient, there *is* hope. Five-year cures result in 82% of *localized* cases.

Monthly breast self-examination and annual health checkups are essential in uncovering such cases. Essential, too, is person-to-person exchange between doctor and patient, to give women a chance to resolve their anxieties about this disease... anxieties which paralyze judgment and delay life-saving action.

The Society's newest film, "Breast Self-Examination," has been highly praised by physicians and laymen. A physician is present at each showing so that women may ask questions and be influenced to see their own doctors promptly about any breast problem.

The Society is working intensively on the breast cancer problem, through research and education. Through our concerted efforts... yours, doctor, and ours... we *will* prevail against this great enemy.

AMERICAN CANCER SOCIETY®

LOUISIANA DIVISION, INC.
204 Delta Building New Orleans 12, La.

Louisiana State Board of Health

W. J. REIN, M.D., President



Formerly nervous and tense, now better able to...

enjoy her family

This, in essence, is what happens when you place a patient on Librium (chlordiazepoxide HCl). Since this agent generally relieves anxiety and tension without dulling mental clarity or inducing drowsiness, most patients become better able to function normally, take an active interest in family and surroundings, meet and solve daily problems. This antianxiety agent is virtually free from extrapyramidal side effects, and does not produce or deepen depression.

DOSAGE: **Oral**—Usual adult dose in mild to moderate anxiety and tension is 5 or 10 mg, 3 or 4 times daily; in severe anxiety and tension, 20 or 25 mg, 3 or 4 times daily. **Parenteral**—To control acute conditions, the usual initial adult dose is 50 to 100 mg I.M. or I.V.; not more than 300 mg should be given during a 6-hour period. ☐ SIDE EFFECTS: **Oral**—Drowsiness and ataxia, usually dose-related, have been reported in some patients—particularly the elderly and debilitated. Paradoxical reactions, i.e., excitement, stimulation, elevation of affect and acute rage, have been reported in psychiatric patients; these reactions may be secondary to relief of anxiety and should be watched for in the early stages of therapy. Other infrequent dose-related side effects have included isolated instances of minor skin rashes, minor menstrual irregularities, nausea, constipation, increased and decreased libido. **Parenteral**—Following parenteral administration some patients may become drowsy or unsteady. The injectable form has occasionally produced mild, transitory fluctuations of blood pressure. ☐ PRECAUTIONS: **Oral**—In elderly, debilitated patients, limit dosage to smallest effective amount to preclude development of ataxia or oversedation (not more than 10 mg per day initially, to be increased gradually as needed and tolerated). Until the correct maintenance dosage is established, patients receiving this agent should be advised against possibly hazardous procedures requiring complete mental alertness or physical coordination. Although this agent is a valuable aid in acute and chronic alcoholism, caution patients about possible combined effects with alcohol. Caution should be exercised in administering it to addiction-prone individuals. Careful consideration should be given to the pharmacology of any agents to be employed with Librium (chlordiazepoxide HCl)—particularly the MAO inhibitors and phenothiazines. Observe usual precautions in impaired renal or hepatic function. Periodic blood counts and liver function tests may be advisable in protracted treatment. **Parenteral**—Parenteral administration is indicated primarily in acute states, and patients receiving this form of therapy should be kept under observation, preferably in bed, for a period of up to three hours. Ambulatory patients should not be permitted to operate a vehicle following injection. The usual precautions of reduced dosage should be observed when treating patients with impaired renal or hepatic function. The injectable form should not be given to patients in shock or comatose states. Reduced dosage (usually 25 to 50 mg) should be used for elderly or debilitated patients, and for children.

Anxiety and tension relieved
Alertness maintained

Librium®
(chlordiazepoxide HCl)

the successor
to the tranquilizers

ROCHE
ROCHE

NAL of the LOUISIANA STATE MEDICAL SOCIETY

LOUISIANA STATE MEDICAL SOCIETY

JUNE, 1963

Formerly NEW ORLEANS MEDICAL and SURGICAL JOURNAL
OFFICIAL ORGAN OF THE LOUISIANA STATE MEDICAL SOCIETY

Copyright 1963 by
siana State Medical Society.
0 per annum, 35¢ per copy

Vol. 115, No. 6

Published monthly by
The Journal of the Louisiana State
Medical Society, Inc.
1430 Tulane Ave., New Orleans 12

Contents

Unrecognized Depression 191
Charles Watkins, M. D., New Orleans

Current Thought on Congenital Heart Disease in Infancy 196
J. L. Reynolds, M. D., Baton Rouge

Recurrent Pulmonary Infarction, Partially Masked by Antibiotic Therapy 201
Harry B. Greenberg, M. D., New Orleans

The Diagnosis and Treatment of Skin Tumors 204
Joe C. Tilley, M. D., Baton Rouge

Psychiatric Manifestations of Sheehan's Syndrome 208
Wells Buddington, M. D., New Orleans



Dentistry Replies 211
Nathaniel H. Rowe, D.D.S., M.S.D., St. Louis, Missouri

Editorial 214

Organization Section 216

Medical News Section 222

Book Reviews 224

Index to Advertisers 28

LIBRARY
JUN 21 1963
NEW YORK
OF

Simple diarrhea?

Control it with
safe / effective / economical / pleasant-tasting

Quintess®
(attapulgite compound, Lilly)

Available in 6-ounce plastic and 1-pint glass bottles.

Eli Lilly and Company • Indianapolis 6, Indiana, U.S.A.

Lilly

362030

Second Class Mail Privileges Authorized at New Orleans, Louisiana

"SUMMER HEALTH HAZARDS"

Now that school is about to close and summer vacation is near, it is an appropriate time to sound a warning about the various health hazards that usually accompany summer activities. These are excessive sunburn, swimming and boating accidents, dehydration and heatstroke from injudicious participation in strenuous summer sports, allergic reactions induced by insect bites, contact with poison ivy, oak or sumac at that outdoor picnic. That old advice is as sound today as it ever was—"An ounce of prevention is worth a pound of cure".



Louisiana State Board of Health

W. J. REIN, M.D.

President



BOTTLED UNDER AUTHORITY OF THE COCA-COLA COMPANY BY
THE LOUISIANA COCA-COLA BOTTLING CO., LTD.



You Know--

that we know!

TRUSTED MANY MILLIONS OF TIMES

GOOD DRUG STORES ONLY THE BEST
Katz & Besthoff, Inc.

Prescription Headquarters Since 1905

It's your professional privilege to replenish your ranks...

Give to medical education through AMA-ERF

AMA-ERF

American Medical Association
Education and Research Foundation
535 N. Dearborn St., Chicago 10, Illinois

MEDICAL BOOKS
Of All Publishers
Any book on Medicine, Surgery, and Nursing

J. A. MAJORS COMPANY

147 South Liberty St.
NEW ORLEANS 12, LA.

——Catalogs cheerfully sent upon request——





For dramatic restoration

WINSTROL®

brand of STANOZOLOL

Oral anabolic therapy with this new physiotonic helps restore the patient's: positive protein metabolism; confidence, alertness and sense of well-being.

WINSTROL (stanozolol/Winthrop), a heterocyclic steroid, combines highest potency* with outstanding tolerance, stimulates appetite and promotes weight gain... restores a positive metabolic balance. It counteracts the catabolic effects of concomitant corticosteroid or ACTH therapy. WINSTROL (stanozolol/Winthrop) rebuilds body tissue while it builds strength, confidence and a sense of well-being in conditions associated with excess protein breakdown, insufficient protein intake and inadequate nitrogen and mineral retention.

Side Effects and Precautions: Prolonged administration can produce mild hirsutism, acne or voice change. In an occasional patient, edema has been observed and in young women the menstrual periods have been milder and shorter. These side effects are reversible, and patients receiving prolonged treatment should be examined and questioned periodically so that, should side effects appear, the dosage may be reduced or administration of the drug discontinued for a time.

In patients with impaired cardiac and renal function, there is the possibility of sodium and water retention. Liver function tests may reveal an increase in bromsulphalein retention, particularly in elderly patients. In such cases, therapy should be discontinued. Although it has been used in patients with cancer of the prostate, its mild androgenic activity is considered by some investigators to be a contraindication.

Dosage: Usual adult dose, 1 tablet t.i.d. before or with meals; young women, 1 tablet b.i.d.; children (school age): up to 1 tablet t.i.d.; children (preschool age): ½ tablet b.i.d. Available as scored tablets of 2 mg. in bottles of 100. For best results, administer with a high protein diet.

*ANIMAL DATA

Rx WINSTROL (stanozolol/Winthrop) whenever anabolic therapy is indicated

Winthrop

Winthrop Laboratories, New York 18, New York



diarrhea is a threefold challenge–

HYPERMOTILITY···CRAMPS···ANXIETY

Donnagel provides the antispasmodic-sedative action of Donnatal,® plus toxin adsorbents and demulcents—for effectively controlling gastrointestinal hypermotility, decreasing spasm, relieving pain and easing mild anxiety.

SIDE EFFECTS: On increased dosage blurred vision, dry mouth or difficult urination may occasionally occur.

PRECAUTIONS: Use with caution in incipient glaucoma or prostatic hypertrophy.

CONTRAINDICATIONS: Do not administer to patients with acute glaucoma, or to patients hypersensitive to any component.

Donnagel®

Robins

Available also as DONNAGEL®-PG...same formula plus powdered opium USP 24 mg. (equiv. to paregoric 6 ml.).
(Warning: May be habit-forming)

A. H. ROBINS CO., INC., Richmond 20, Virginia

Each fluidounce (30 cc.) contains:

Kaolin	6.0 Gm.
Pectin	142.8 mg.
Donnatal—Natural belladonna alkaloids	
hyoscyamine sulfate	0.1037 mg.
atropine sulfate	0.0194 mg.
hyoscine hydrobromide	0.0065 mg.
Phenobarbital (¼ gr.)	16.2 mg.

(Warning: May be habit-forming)



whatever the shape or form of allergy...

Benadryl®
(Diphenhydramine hydrochloride)

effectively relieves the symptoms of vasomotor rhinitis For patients sensitive to animal danders, this agent provides twofold therapeutic action to help abort an allergic attack. **Antihistaminic action:** A potent antihistaminic, it breaks the cycle of allergic response, bringing relief of sneez-



ng, lacrimation, nasal blockage, and rhinorrhea. **Antispasmodic action:** Because of its inherent atropine-like properties, the drug affords concurrent relief of bronchial spasm. ***Indications:*** Allergic diseases such as hay fever, allergic rhinitis, urticaria, angioedema, bronchial asthma, serum sickness, atopic dermatitis, contact dermatitis, gastrointestinal allergy, vasomotor rhinitis, pruritus, physical allergies, reactions to injection of contrast media, reactions to therapeutic preparations, and allergic transfusion reactions; also postoperative nausea and vomiting, nausea of pregnancy, motion sickness, parkinsonism and drug-induced extrapyramidal reactions, and quieting emotionally disturbed children. Parenteral administration is indicated where, in the judgment of the physician, prompt action is necessary and oral therapy would be inadequate. ***Precautions:*** Avoid subcutaneous or perivascular injection. Single parenteral dosage greater than 100 mg. should be avoided, particularly in hypertension and cardiac disease. Persons who have become drowsy on this or other antihistamine-containing drugs, or whose tolerance is not known, should not drive vehicles or engage in other activities requiring keen response while using this product. Hypnotics, sedatives, or tranquilizers, if used with this product, should be prescribed with caution because of possible additive effect. Diphenhydramine hydrochloride has an atropine-like action which should be considered when prescribing it. Cream (Ointment) should not be applied to extensively denuded or weeping skin areas. ***Supplied:*** Kapseals® of 50 mg.; Capsules of 25 mg.; Emplets® (enteric-coated tablets) of 50 mg.; in aqueous solutions: 1-cc. Ampoules, 50 mg. per cc.; 10- and 30-cc. Steri-Vials,® 10 mg. per cc. with 1:10,000 benzethonium chloride as a germicidal agent; Elixir, 10 mg. per 4 cc. with 14 per cent alcohol; 2 per cent Ointment (water-miscible base).

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit 32, Michigan

14563

Solfoton®

for mild, continuous sedation

Each tablet (or capsule) contains 16 mg. phenobarbital blended with 65 mg. Bensulfoid®. The Bensulfoid is an inert diluent present to permit slow absorption of the phenobarbital. The usual dosage is one tablet or capsule after meals and at bedtime. Solfoton is especially adapted to prolonged use because of its virtual freedom from depression and other side effects. Contra-indications: identical to those of ¼ gr. phenobarbital.

REFER TO PDR

Poythress, White Section, Page 808 (1963 edition) and Product Identification Section

COMPLETE INFORMATION AND CLINICAL SAMPLES SENT UPON REQUEST

Dispensed in bottles of 100 and 500 tablets or capsules

WM. P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA

Manufacturers of ethical pharmaceuticals since 1856

Three New Editions

New from SAUNDERS

New (11th) Edition!
Beeson & McDermott—Cecil-Loeb
TEXTBOOK OF MEDICINE

A new and distinguished team of Editors guides this well-known textbook in its *New (11th) Edition*. Its basic philosophy is to provide precise and thorough descriptions of those disease entities you are likely to encounter. Each is discussed fully and completely: *etiology, epidemiology; morbid anatomy; pathologic physiology; symptoms; diagnosis; prognosis; therapy.* Contents range from a commentary on *Patient-Physician Communication* to *Management of Bronchopulmonary Insufficiency.* In this revision you'll find increased emphasis on pathologic physiology; a new section on *Genetic Disease;* expansion of the material on *Viral Diseases;* reorganization and augmentation of sections on *Bronchopulmonary Disease* and *Gastroenterology;* a brilliant discussion of *Nucleic Acids, Genes, Viruses, and Immunity;* 67 new contributors. *The text is available either as a single volume or a two-volume set.*

Edited by PAUL B. BEESON, M.D., Ensign Professor of Medicine, Yale University School of Medicine; and WALSH MCDERMOTT, M.D., Livingston Farrand Professor of Public Health, Cornell University Medical College. With contributions by 173 authorities. With the assistance of 5 Associate Editors. About 1822 pages, 7⅜" x 10¾", with about 238 illustrations. Single Volume About $19.50. Two-Volume set About $23.50.

New (11th) Edition—Ready June!

New (2nd) Edition!
Aegerter and Kirkpatrick—
ORTHOPEDIC DISEASES

Dr. Aegerter, a pathologist, and Dr. Kirkpatrick, a radiologist, examine bone disease from the standpoint of its altered morphology and physiology—and then interpret the alterations in terms of symptomatology and roentgenology. For each skeletal disease (ranging from *Achondroplasia* to *Villonodular Pigmented Synovitis)* the authors describe: clinical manifestations; radiographic and laboratory findings; prognosis. For this up-to-date *New (2nd) Edition* there is considerably more material on radiographic demonstration of bone lesions and much greater emphasis on bone diseases and lesions of children. There are few other sources in which all the basic aspects of bone and joint disease are so well illuminated. Its conciseness is such that the general practitioner can gain a better understanding of the complex aspects of arthritis and bone diseases without sifting masses of material.

By ERNEST AEGERTER, M.D., Professor of Pathology and Director of the Department of Pathology, Temple University Medical Center and School of Medicine; Professor of Orthopedic Pathology, University of Pennsylvania Graduate School of Medicine; Chief in Pathology, Philadelphia General Hospital; and JOHN A. KIRKPATRICK, Jr., M.D., Radiologist, St. Christopher's Hospital for Children; Associate Professor of Radiology (Pediatrics), Temple University School of Medicine; Radiologist, Children's Heart Hospital. About 800 pages, 6½" x 9¼", with about 541 illustrations. About $16.00.

New (2nd) Edition—Ready June!

New (5th) Edition!
Andrews and Domonkos—
DISEASES OF THE SKIN

You'll find a concise, practical approach to clinical recognition and therapy of skin diseases in this *New (5th) Edition*—soundly based on modern histopathology. Virtually every dermatologic disease commonly encountered in practice is discussed—*eczema, hives, acne, impetigo, athlete's foot, pruritis, cutaneous neurosis,* etc. Anatomy, physiology, etiology and pathology of the skin and its disorders are meticulously discussed. Indications for surgical treatment are pointed out and techniques for biopsy and electrosurgery are fully described. A major feature of the *New (5th) Edition* is the inclusion of 175 new, brilliantly clear photographs of skin lesions to aid you in recognition. Many significant new entities have been added. All of the chapters are completely revised. The uses and possible hazards of newer drugs such as *amphotericin B, Norethynodrel, corticosteroids, micronized griseofulvin,* are described. There is full coverage of the connective tissue (Collagen) diseases and a description of newly recognized diseases of the reticuloendothelial system.

By GEORGE C. ANDREWS, M.D., Clinical Professor of Dermatology (Ret.) and ANTHONY DOMONKOS, M.S., Assistant Clinical Professor of Dermatology, College of Physicians and Surgeons, Columbia University. About 752 pages, 7" x 10", with about 596 illustrations. About $18.00.

New (5th) Edition—Ready June!

To Order Mail Coupon Below!

W. B. SAUNDERS COMPANY
West Washington Square Philadelphia 5

Please send and bill me:

☐ Beeson & McDermott—
Cecil-Loeb *Textbook of Medicine*....About $19.50
☐ 2 vol. set.....About $23.50

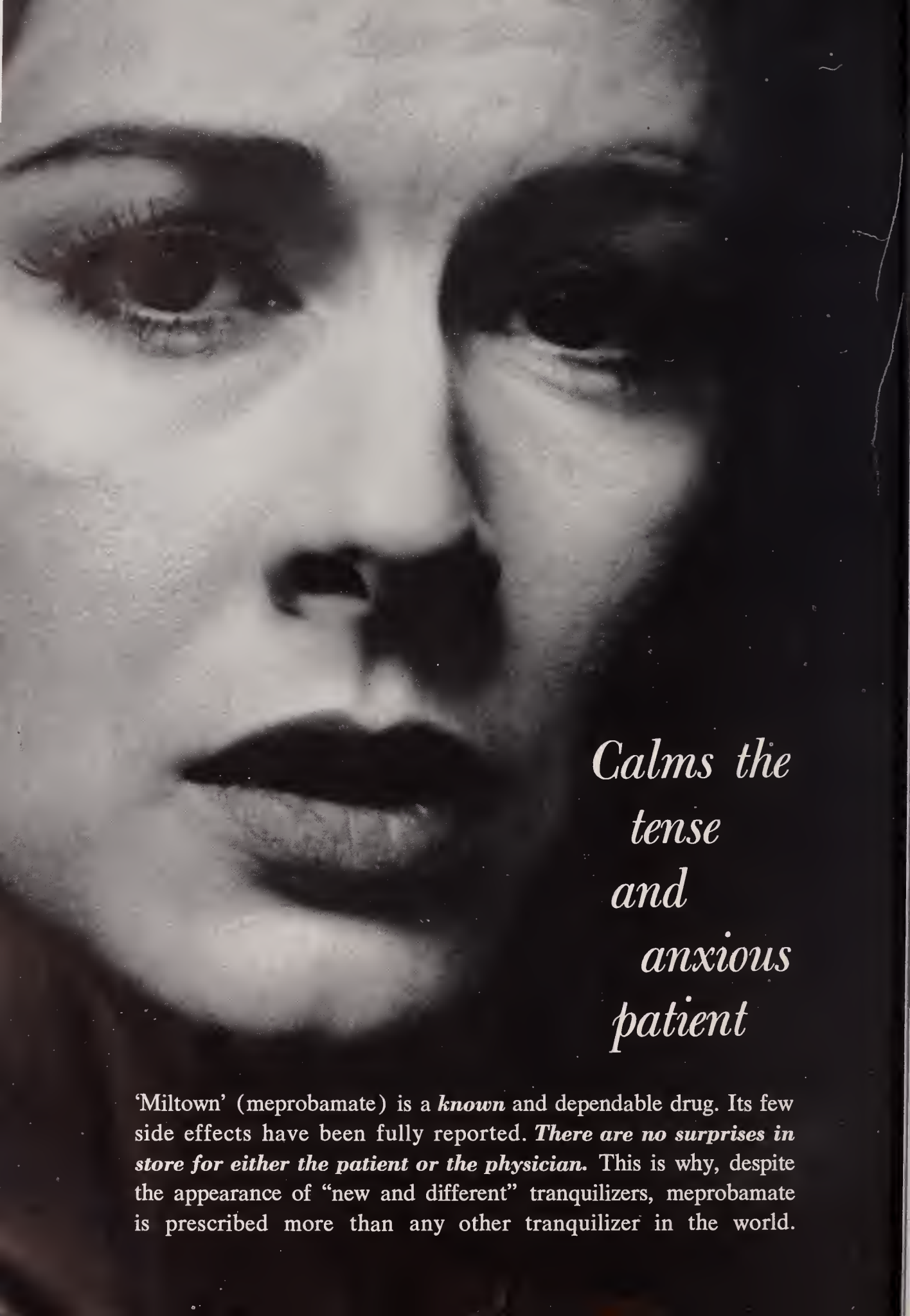
☐ Andrews & Domonkos—
Diseases of the Skin.....About $18.00

☐ Aegerter & Kirkpatrick—
Orthopedic Diseases.....About $16.00

Name.....

Address.....

SJG 6-63



'Miltown' (meprobamate) is a ***known*** and dependable drug. Its few side effects have been fully reported. ***There are no surprises in store for either the patient or the physician.*** This is why, despite the appearance of "new and different" tranquilizers, meprobamate is prescribed more than any other tranquilizer in the world.

Clinically Proven

in more than 750 published clinical studies
and over eight years of clinical use

Outstanding Record of Effectiveness and Safety

1. Relieves anxiety and anxious depression in a broad spectrum of clinical conditions.
2. Doesn't leave patients "too groggy" to work or think or learn.
3. Relaxes both mind and skeletal muscle. Relieves physical tension as well as emotional stress.

Slight drowsiness may occur with meprobamate and, rarely, allergic reactions. Meprobamate may increase effects of excessive alcohol. Use with care in patients with suicidal tendencies. Massive overdosage may produce coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Withdraw gradually after prolonged use at high dosage.

Usual dosage: 1 or 2 400 mg. tablets t.i.d.

Supplied: 400 mg. scored tablets, 200 mg. sugar-coated tablets; bottles of 50.

the original meprobamate

Miltown®

WALLACE LABORATORIES / *Cranbury, N. J.*

CH-9239

PROFESSIONAL MANAGEMENT SERVICE CAN HELP YOU BE A

FULL-TIME DOCTOR



Delegation of time-consuming work not requiring your training and experience releases you to more productive and rewarding work only you can do. The Professional Management Service is equipped to save you time . . . to relieve you and your staff of both menial and critical business tasks . . . and to increase your income. Our service offers you the benefits of specially trained, and equipped personnel under the careful supervision of specialists in medical business management, however you maintain complete control of your business activities!

We Offer These Services -

ACCOUNTS RECEIVABLE MANAGEMENT Professional Management Service trained bookkeepers, electric equipment and modern, proven-in-use methods designed to the needs of medical accounts are used to minimize the business workload in your office. Professional, accurate, itemized statements encourage prompt payment. This service pays big dividends in good will, time savings and net dollar return.

CONSULTATION Professional Management Service also includes special services, as needed, such as counseling on all insurance, investments, office personnel, fees, office lay-out, etc.

BASIC BOOKKEEPING SERVICE Formal accounting records are maintained by Professional Management Service. This includes income and expenses, depreciation, capital accounts, monthly financial report and tax return preparation.

PRE-COLLECTION PROGRAM A constructve approach to slow-paying accounts, subject to your control, this service is used with the ARM Service, above, or to supplement billing by your own staff. Custom designed to your needs and policies, but all time-consuming work is done by Professional Management Service.

COMPREHENSIVE BUSINESS SERVICE Most beneficial to physicians is the assumption of the complete business side of practice by the Professional Management Service in a co-ordinated, comprehensive service encompassing all functions named above.



PROFESSIONAL MANAGEMENT SERVICE

New Orleans, Louisiana

700 MAISON BLANCHE BLDG., PHONE 524 1177

A Specialized Service . . . Exclusively Professional

throughout the wide middle range of pain — control with one analgesic **PERCODAN®** *tablets*

(Salts of Dihydrohydroxycodeinone and Homatropine, plus APC)

In a comprehensive range of indications marked by moderate to moderately severe pain, PERCODAN assures speed, duration, and depth of analgesia by the oral route... acts within 5 to 15 minutes... usually provides uninterrupted relief for 6 hours or longer with just 1 tablet... rarely causes constipation.

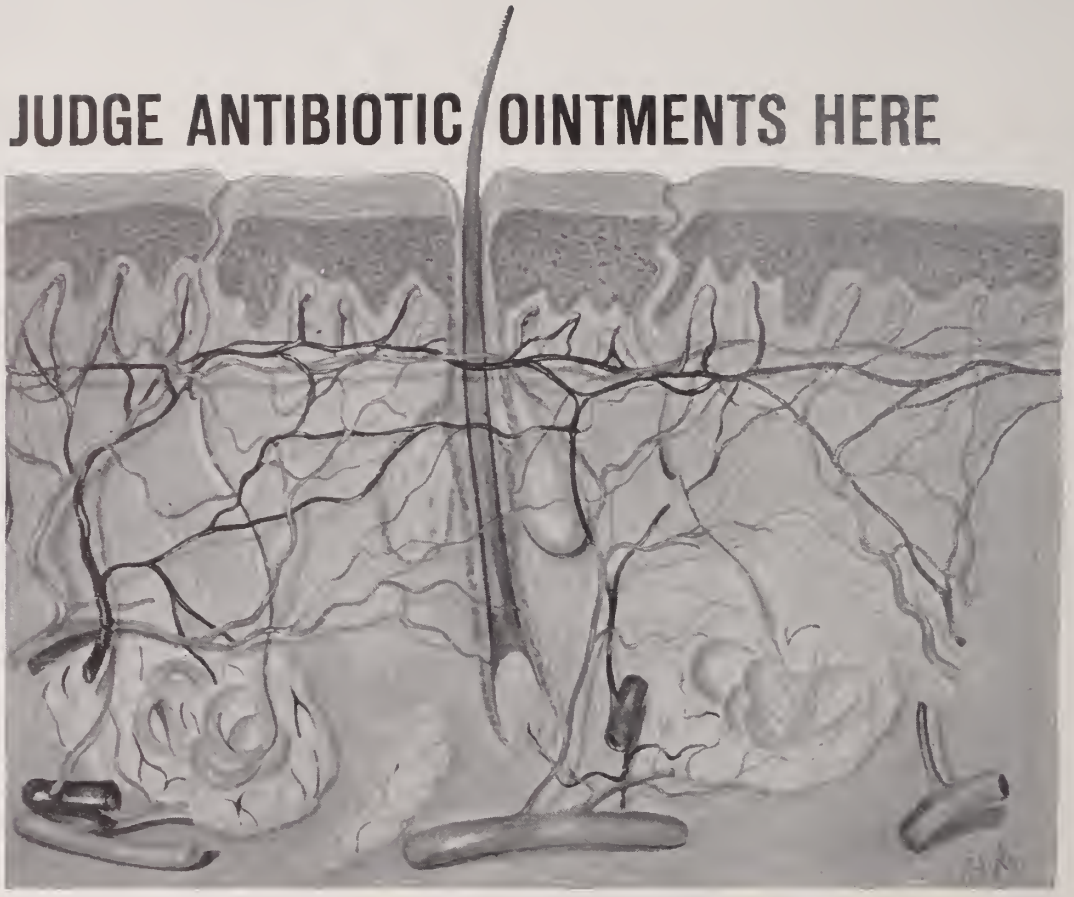


Formula — Each scored yellow PERCODAN* Tablet contains 4.50 mg. dihydrohydroxycodeinone HCl (Warning: May be habit-forming), 0.38 dihydrohydroxycodeinone terephthalate (Warning: May be habit-forming), 0.38 mg. homatropine terephthalate, 224 mg. acetylsalicylic acid, 160 mg. acetophenetidin, and 32 mg. caffeine. **Also available:** PERCODAN®-DEMI, containing the complete PERCODAN formula but with only half the amount of salts of dihydrohydroxycodeinone and homatropine. Both products are on oral Rx in all states where laws permit. **Average Adult Dose**—1 tablet every 6 hours. **Side Effects and Contraindications**—Although generally well tolerated, PERCODAN may cause nausea, emesis, or constipation in some patients. PERCODAN should be used with caution in patients with known idiosyncrasies to acetylsalicylic acid or acetophenetidin and in those with blood dyscrasias. *Literature on request.* **ENDO LABORATORIES Richmond Hill 18, New York**

Endo®

*U.S. Pats. 2,628,185 and 2,907,768

JUDGE ANTIBIOTIC OINTMENTS HERE



Results on skin are final proof of any topical antibiotic's effectiveness

No in vitro test can duplicate a clinical situation on living skin. 'Neosporin' (polymyxin B—bacitracin—neomycin) Antibiotic Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and rarely sensitizes.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs.

Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.

Complete literature available on request from Professional Services Dept. PML.

'NEOSPORIN'®

brand

POLYMYXIN B-BACITRACIN-NEOMYCIN ANTIBIOTIC OINTMENT

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

Get your low-back patient back to work in days instead of weeks



You can expect rapid results from 'Soma' (carisoprodol)—because this unique drug breaks up both the spasm and pain of low-back syndrome at the same time.

Your patients will usually begin to feel better within a few hours. And as Kestler demonstrated in a controlled study of 212 consecutive patients with low-back problems: the average time for full recovery was only 11.5 days with 'Soma' (carisoprodol), 41 days without it. (J.A.M.A., April, 1960.)

Carisoprodol seldom produces side effects. Occasional drowsiness may occur, usually at higher than recommended dosage. Individual reactions may occur rarely.

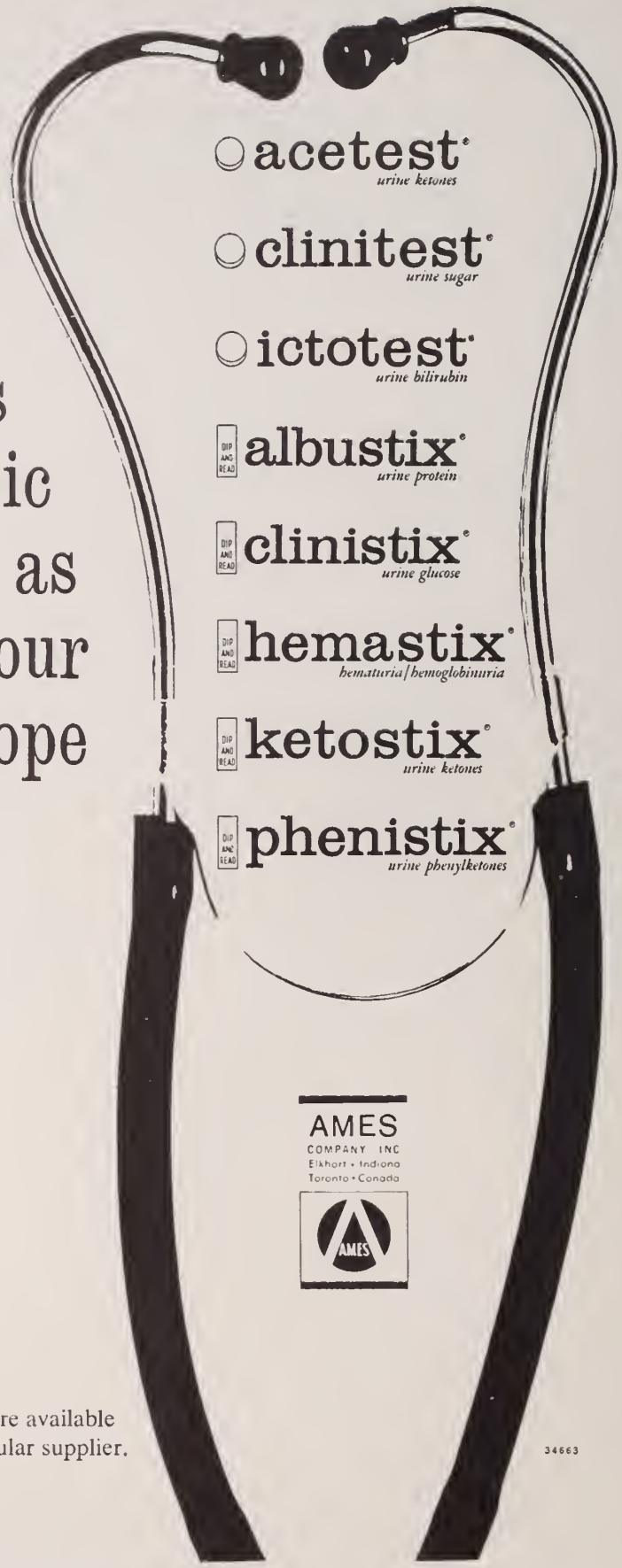
USUAL DOSAGE: ONE 350 MG. TABLET Q.I.D.

The muscle relaxant with an independent pain-relieving action

Soma®
carisoprodol

Wallace Laboratories
Cranbury, New Jersey

urine tests as basic as your stethoscope



acetest®
urine ketones

clinitest®
urine sugar

ictotest®
urine bilirubin

albustix®
urine protein

clinistix®
urine glucose

hemastix®
hematuria/hemoglobinuria

ketostix®
urine ketones

phenistix®
urine phenylketones

AMES
COMPANY INC
Elkhart • Indiana
Toronto • Canada

AMES products are available through your regular supplier.

34663

Schering

in dermatoses amenable to topical steroid therapy

METI-DERM®

Prednisolone, 16.6 mg. in 50 Gm. container and 50 mg. in 150 Gm. container; in nonsensitizing vehicle—isopropyl myristate with inert propellants—trichloromonolluoromethane, dichlorodifluoromethane.

AEROSOL

COOLS

instant cooling, soothing effect • covers every part of the lesion, any area of involvement • controls the itch, delimits the area of edema and erythema • nonfluorinated—avoids risk of steroid absorption • easy to carry and apply away from home—no residue on the skin



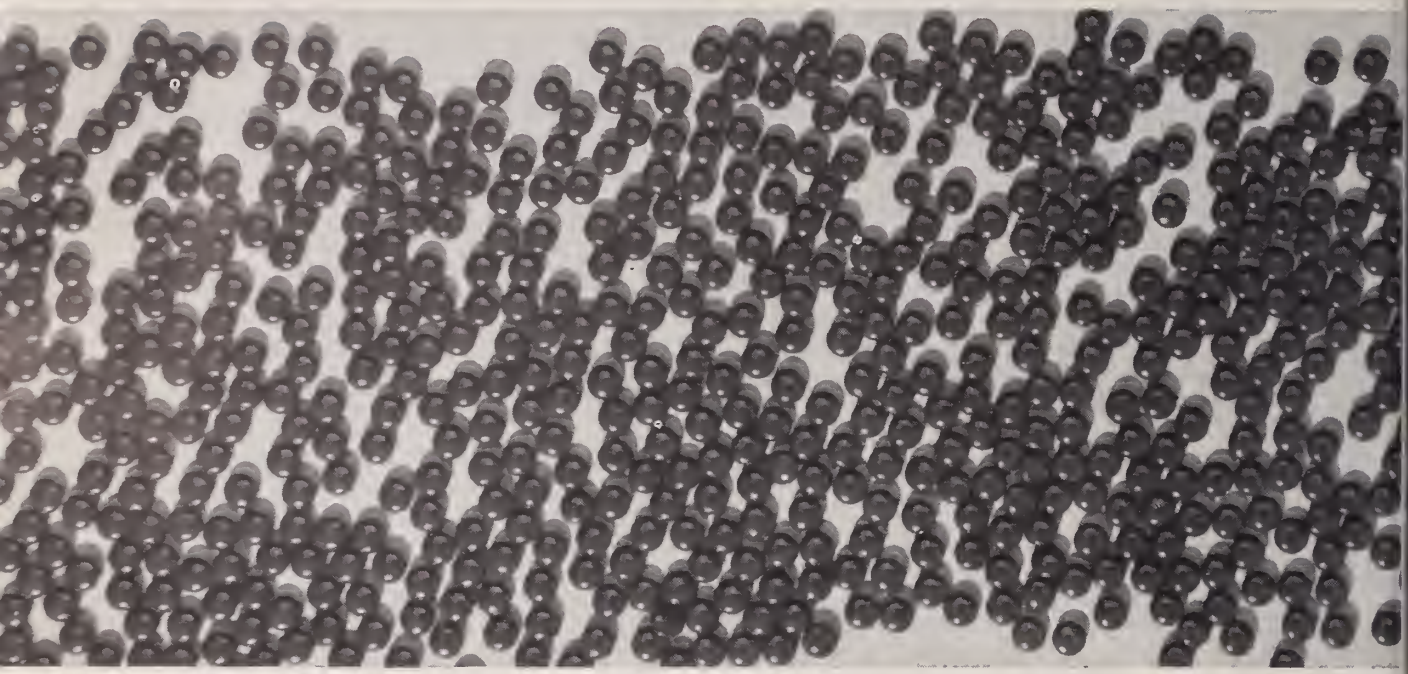
Clinical Considerations: In allergic dermatoses, until the specific causative agent is identified and removed from the patient's environment, the condition may be expected to recur when therapy is terminated. If infection is present, appropriate antibacterial measures should be taken. METI-DERM (prednisolone) Aerosol should not be sprayed around the eyes. Contents of can are not flammable but are under pressure. Containers should be stored in a cool place and neither punctured nor incinerated. For complete details, consult Schering literature available from your Schering Representative or Medical Services Department, Schering Corporation, Union, New Jersey.

® prednisolone topical, Schering.

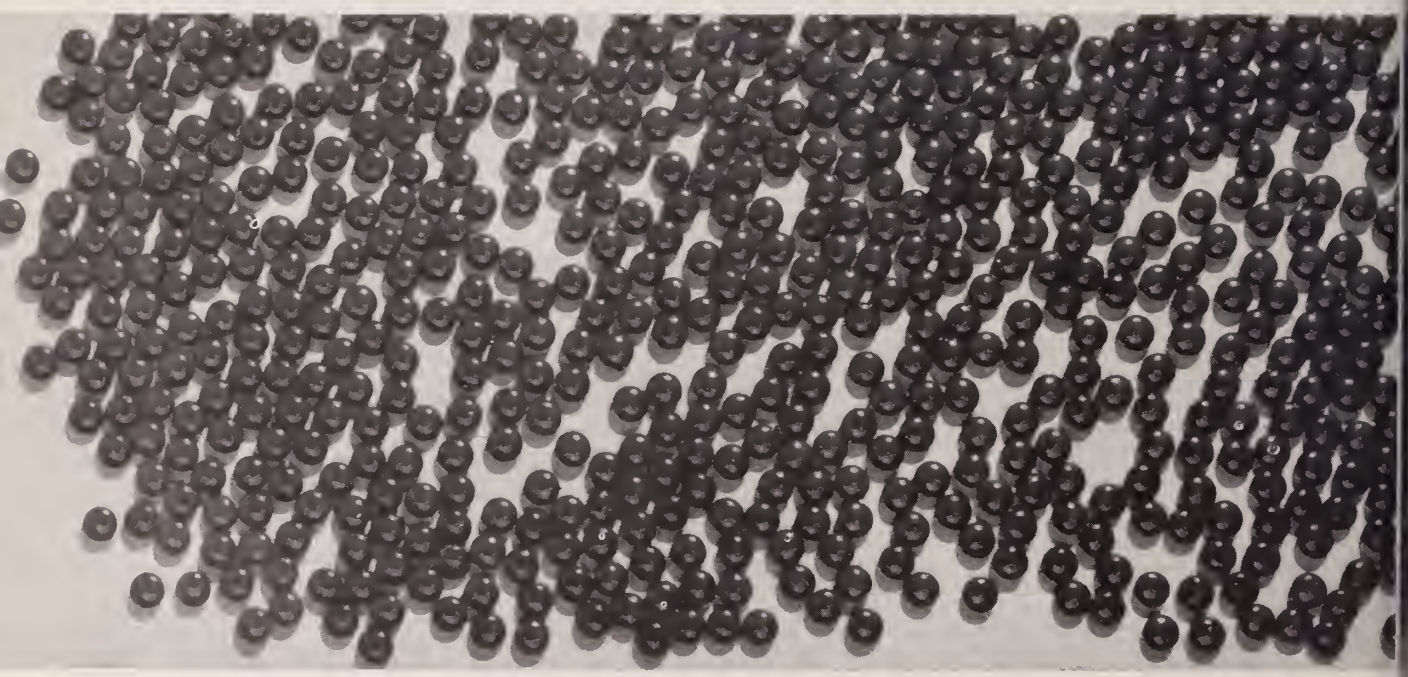
S-192R



This is half an inspection



. . . this is the other half



Inspecting a coated tablet poses a two-sided problem: How do you make certain that both top and bottom are flawless without picking up each tablet and turning it? ■ We have a machine especially designed to do the job. The tablets pass along a belt under the watchful eye of an inspector. Any tablet that has the slightest irregularity in shape or coating is rejected. Then a second belt overrides the first and, holding the tablets tightly in place, turns them over and delivers them to another belt for inspection of the other side. ■ It is another in a long series of control measures designed to deliver quality pharmaceuticals every time.

Eli Lilly and Company • Indianapolis 6, Indiana, U.S.A.

Lilly

390079

The Journal

of the

Louisiana State Medical Society

$4.00 Per Annum, 35c Per Copy
Vol. 115, No. 6

JUNE, 1963

Published Monthly
1430 Tulane Avenue, New Orleans 12, La.

Unrecognized Depression*

• An illness in which the psychiatric background often goes unrecognized.

CHARLES WATKINS, M. D.
New Orleans

TOO often depression is not considered as a possibility in the differential diagnosis of an obscure problem, or as the cause of an unsatisfactory or delayed convalescence.

Sydenham stated that the neurosis was the second most common cause of illness in England during his day. At that time, neurotic disorders were exceeded in frequency only by the fevers. It is highly likely that they are no less common in our current society. George Cheyne, author of the book, *The English Malady*, stated that 30 per cent or more of the individuals who sought physicians' help in the early 18th century were suffering from neurotic illnesses. It is interesting to note that the reported etiological factors were as varied then as they are now. Some authors looked upon the fast pace of living in the early 18th century as being the cause of the increased amount of psychiatric illness. Life was not as easy and relaxed as it had been in the old days, that is, back in the 17th century. Other individuals, perhaps of a somewhat more moralistic leaning, attributed the increase in psychiatric illness to the easy living of the day. England, of the 18th century, was looked upon as a paradise where man no longer had to struggle as he had done in the past, where physical illnesses were less frequent, and where because of the leisure, the individual was able to think about himself and develop neurotic symptoms.

Of the psychiatric illnesses, depression is the one perhaps most easily mistaken. The depressed individual may be mistakenly identified as suffering from a somatic disorder or to have another type of psychiatric illness. Both of these viewpoints tend to reduce the effectiveness of our patient care considerably. The search for physical causes of disability are frequently unsuccessful, and the discarding of the patient as just a neurotic, as is frequently done, would deprive him of specific medical procedures that might be effective in relieving his depression.

Too often the generalization is made that the individual with a psychiatric illness presents the characteristic history of a chronic anxiety, or of a chronic hysteria. He is thought of as a person striving to avoid responsibility; and in our modern age of compensation and welfare, we also frequently think of him as an individual who is attempting to get something for

* Presented at the Eighty-second Annual Meeting of the Louisiana State Medical Society, May 9, 1962, in Monroe.

nothing, either from an insurance company, or from a welfare department. In either instance, there is a tendency to look upon the patient as an individual with a long history of incapacity and dependency, and a poor economic adjustment. This generalization is not true of psychiatric patients as a group, and particularly is it untrue of the depressive.

The individual suffering with a depression is as likely to give a history of good work adjustment, adequate social relationship, and not infrequently of being a very active member of the community. Another picture of the chronic depressive is a quiet submissive wife, obedient to her husband's and children's wishes, who has gradually submerged her own desires and viewpoints to such an extent that she is in effect run-down.

Because of this tendency to generalize as to what a psychiatric patient is like, not infrequently, an individual suffering with a chronic depression, a treatable psychiatric disorder is subjected to multiple diagnostic procedures, repeated surgery, innumerable injection of vitamins, and the frightening experience of finally being told that there is nothing wrong with him.

Case Reports

Case No. 1. A very interesting and informative example of this failure to recognize depression is that of a 50 year old white male, active business man, professionally and socially successful, who during the fall and winter months of this year, suffered a mild hypomanic attack. This was recognized and he was treated successfully and finally the manic symptomatology subsided. The patient returned to his local community, under the care of the physician who had referred him to the psychiatrist. After a relatively short time he began to develop symptoms of fatigability, lack of energy, etc. The physician who had recognized the manic episode, somehow failed completely to carry through, and recognize this as a depressive reaction. The patient was hospitalized and subjected to an extensive medical workup. All diagnostic procedures were negative. He was then placed on Thorazine, and became progressively worse. Finally, he was re-referred to the psychiatrist who had handled him during his manic episode, the medication was changed, and the patient is rapidly returning to his normal level.

Case No. 2. A 51 year old white female was seen in dermatology clinic for a neurodermatitis. It is interesting that in this individual the psychological nature of her illness was recognized, but no attempt was made to ascertain factors relevant to the etiology so that treatment could be most effectively carried out. This woman had a hysterectomy four years before, which was a severe psychological loss to her. She was of the group of individuals who somehow have the idea that a woman without a uterus is no longer sexually attractive. There was a marked change in her relationship with her husband with the feeling that she was not satisfying him, a sudden cessation of her sexual interest which had been good up until that time. This was accompanied by the development of a neurodermatitis, and by the classic signs; manifestation of depression, loss of appetite, sleep disturbances, mood disturbances, lack of interest, etc. The patient was treated as a depression, her neurodermatitis cleared and her sexual drive was re-developed.

Case No. 3. A 25 year old student came to me by self referral. He had made a diagnosis of psychiatric illness on himself.

The patient gave a history of having been ill the two previous summers with "physical illness". Two years before the patient had an attack of "flu" shortly after the end of school. This was followed by a prolonged convalescence with lack of appetite, weight loss, reduction of energy, inability to concentrate, poor sleep and other symptoms.

He recovered shortly after school began in the fall.

The year previously, at about the same time of year, he developed symptoms referable to the gastrointestinal system so that a diagnosis of ulcer was suspected. X-ray examination did not reveal the presence of an ulcer. The patient went through the summer in a state of much reduced activity with loss of energy and interest, inability to concentrate, etc. He again recovered shortly after school started.

During the year prior to coming to see me, he had some contact with psychiatric literature and his presenting complaint was that he thought he was going crazy. The reason for the psychiatric orientation was based upon the same symptoms described above, plus the recognition of a repetitive pattern and the classic sleep disturbance of the depressive.

The patient was treated and recovered more rapidly than he had done with the two previous episodes.

Signs and Symptoms

The depression as seen by the non-psychiatrist frequently manifests itself without the mood description that we usually find in the severely depressed psychotic. Individuals who are depressed have symp-

toms and signs suggestive of recognizable organic pathology in many areas, and unfortunately the depression occurs very frequently in the age period where there are disease processes, particularly the degenerative type, present in the individual. Too frequently, attention is paid to the mild arthritis, the retroflexed uterus and not enough attention to the affective disorder that is the cause of the patient's major disability.

In reviewing the signs and symptoms of the affective disorder, it is well to recognize that they manifest themselves not simply in disturbances of mood but also in the physiological area, in the intellectual area, and in the area of thought content.

Even in the area of mood, the mildly depressed individual is not likely to describe a mood disturbance. He is on the other hand more likely to talk about being tired, run down, having loss of energy, of listlessness, a decreased sexual drive, and lack of appetite, than to say he is sad, downhearted, depressed. People usually fail to recognize depression as illness so it is not offered as a complaint. In the physiological area, we have already mentioned some of the disturbances likely to be encountered; lack of appetite, loss of interest in food, disturbances of sleep, particularly of early waking, feelings of fullness in the stomach, constipation or diarrhea, a reduction in sexual drive to impotence or frigidity. In the area of intellectual functioning the patients complain of being unable to concentrate, of having a poor memory, not being as alert as usual. It must be recognized that if we get this complaint about the thought processes in an individual in the 40's or 50's, we are likely to think of it as being due to mild beginning organic changes. The individual who is depressed has simply slowed in intellectual functioning, as this slowing is manifest not only in the area of motility, but also in the areas of thought and concentration. Finally, the depressed patient is likely to complain of being ill. They complain of stomach trouble, of having something wrong with the heart, back pains, etc. A woman is likely to have much complaint associated with the reproductive system, and joint and muscle pains are a very common accompaniment to the disorders. These complaints are frequently described as "neurotic" or "hypochondriacal".

Thus, a typical mild depression, and we must recognize that there is no such thing as an average depression, is an individual in their 30's or 40's who comes to the doctor's office with complaints suggestive of some sort of debilitating disease. A decreased amount of energy, gastrointestinal complaints, possibly dyspepsia, constipation or diarrhea, easy fatigability, of muscle aches and pains, of decreased sexual potency, of insomnia and of generally feeling bad. The patient is immediately worked up, gets a thorough detailed history and physical examination which reveals either a negative picture or the presence of mild changes usually in the degenerative areas. Laboratory reports are likely to indicate some mild anemia with nothing else of significance. The patient is perhaps an individual well known by the practitioner, a member of the same church, perhaps a golfing partner, and could be the banker who has recently negotiated a loan so the physician could expand his office or clinic. In other words, he is a person recognized as not being a neurotic but rather one of the well integrated people that we like to consider as one of our friends so that we can be regarded to some extent as their equal.

The patients in this age group must be considered malignancy suspects so the next step is hospitalization for a definitive work up. The x-rays do not reveal any evidence of a space occupying lesion, but there may be evidence of some motility disturbances in the G.I. tract, possibly an ulcer suspected, gallstones may be present, or a mild infection may be discovered somewhere in the body. These findings may or may not be followed by definitive "treatment", if so, and surgery of some type is carried out, there is a likelihood that the patient will have a prolonged convalescence.

Treatment may be followed by a period of good health or by a recurrence within a number of years.

It is, I think, particularly important that we recognize this area of pathology. Not only because we are obligated to offer the best possible treatment that we can to our patients, but because the failure to recognize a depression may result in the patient being subjected to a number of procedures including possible surgery that may be life endangering, that are expensive, and are not necessarily therapeutic. It is important that the question of depression be considered and a differential diagnosis be made between depression and a neurotic reaction of anxiety complaints or the hysterical reactions, because of difference in course and treatment.

I would strongly urge that any individual who has the responsibility of making differential diagnosis on patients and who has the responsibility particularly in trying to discover the cause of ill defined complaints, of disorders in which the complaints seem to be out of keeping with the severity of the organic symptomatology, that depression should be remembered.

Recognition

In looking for the depressive reaction in any patient, it should be remembered that there are certain approaches that are more likely to bring about this information than others. First, of course, it is obvious that only by looking will you find it in many instances. Second, it should be recognized that the complaints are frequently not recognized by the patient as being depressive and thus mood questions are not entertained. The patient obviously feels bad but thinks he has a right to because he is physically ill. Next, it is also important to recognize that one does not make a diagnosis of psychiatric illness on the basis of the patient's complaints that things are wrong. Too frequently, we tend to discount the possibilities of psychiatric illness when the patient tells us things are going fine, they have no worries or cares, that things would be fine if only they were well. Fourth, in looking for the presence of depression, it is wise to recognize that there is likely to be a repetitive pattern in the patient's history. A detailed medical history or an occupational history is likely to give us information that would make us strongly suspect the presence of depression. For example, one patient that I had recently described to me, a lady somewhat prone to surgery, had three gynecological procedures performed on her in the fall, at two year intervals. It was finally recognized that these complaints did show a fairly consistent cyclic pattern that in all cases the complaints were out of proportion to the extent of the organic pathology as demonstrated on the physical examination, and finally that in the first two instances looking back from the advantage of the third experience, the individual did not recover as rapidly as should have been the case if the illness had been an uncomplicated somatic disorder.

Etiology

In discussing the cause of depression, we must recognize the validity of the psychological theories as to etiology, and must also recognize the possibility that in many instances, the depressed individual may be suffering from a physiologically determined illness, the exact nature of which we have as yet been unable to ascertain. The reaction of certain individuals to Reserpine derivatives is a clear documentation of the fact that drugs can cause individuals to feel bad. The sulfanilamide reactions of the old days frequently were associated with lethargy and depression, as they were with other drugs. A detailed evaluation of the possible drug etiology must be always considered in making a differential diagnosis.

Of the psychological theories, it appears to me that the work of Bibring, on the mechanism of depression is most significant in our handling of these individuals. Bibring discussed depression as being the reaction to some sort of loss. This loss could be psychological, physiological or financial, or could be due to a loss in any

other area, of course. The loss to the individual is reacted to in various manners. Certain individuals handle this by an exaggeration of activity, a denial of feeling, and in an over optimistic reaction, others with the acceptance of the loss without it being overwhelming, and finally others by the severe depressive reaction up to a suicide.

Discussion

Dr. Arthur L. Seale (Pineville): As Dr. Watkins pointed out to you, some studies indicate that perhaps half or more of all patients may present some signs of depression.

A point which he made extremely well and one which I think we cannot overemphasize is the diversity of the symptoms presented by depression—symptoms apparently far removed from the actual trouble which the patient is experiencing.

This has become more important today than ever before, with our new emphasis on rapid treatment of persons who are mentally ill or emotionally disturbed. With rapid treatment has come a stepped-up rate of patient turnover in our hospitals and patients are now returned to their family physicians in very short order in a great many cases—sometimes because of the patient's remission and at other times because of the demands or insistence of the family.

We in the mental health field rely on the family physician for the continued treatment of and care of the patient, particularly when the patient is sent home on chemotherapy. In other cases, the patient may be in complete remission without medicine. But in either event with the chronic shortage of trained and experienced personnel in our State Mental Hospitals, not all cases have correct case work-ups and unfortunately we do not in every instance have full and adequate communication with the home physician.

In our total referrals, we find a fairly large percentage of patients with depressive-like reactions or, for that matter, patients who fit in the area of manic depressives. With these the physician must be aware of the possibility of recurrence of the depression. This is a particularly urgent matter in the case of drug therapies, as many patients may become negligent in taking their medicine, and yet others, for financial reasons, may deliberately stop their medication. Here the danger becomes very real. This can be considered an added responsibility to the nonphychiatric physician.

There is increasing emphasis on the responsibility of the private, non-psychiatric physician for the mental and emotional well-being of his patients as well as their physical care. Here in Louisiana, our mental health or mental hospital system—and I personally prefer to emphasize the positive *health* aspect of the problem—is moving more and more toward the use of the area or community Mental Health Treatment Centers. Patients are referred to these centers by their private physicians, sometimes because there is no private psychiatric help easily available or in other cases because the patient cannot afford the expense of private psychiatric care. In either case, the private physician is able to have his patient treated without the necessity of having him committed to the mental hospital, and when the patient has made sufficient progress he is returned to his physician for continued care. In some cases, I might add, the patient has even been in a community hospital and may come to the treatment center for E.S.T. or other treatment and then return to the community hospital, going back and forth until he is sufficiently recovered to go home.

This can be done most effectively when the mental or emotional disturbance is recognized early. And we are getting increased awareness of this type of morbid state, particularly of depression.

The State Program points to the development of more community facilities, which may be used by the physicians of their respective areas. This is, of course, a relatively new form of service, but it does not represent entry into a new field. It represents, rather, our efforts to remove ourselves from the onus of long-time hospital care for emotionally or mentally ill patients and to return the care of these patients to the private doctors, who heretofore had been hampered in handling these cases by lack of facilities and specialized help.

We have rather recently moved yet another step out into the community, in that we have begun sending out social workers into strategically populated areas served by the treatment center. It is the function of this social worker—we have just one such arrangement at this time—to follow up cases treated at the center. Because of community demand, she has become a resource person in mental health, and physicians as well as social agencies and civil authorities are requesting her services.

Thus, through early detection of depressions and subsequent treatment in early stages of the illness, many mental—and for that matter physical—breakdowns may be aborted.

I am afraid I may seem to be straying a little bit far afield, but in my mind all this points up the need for more general understanding of not just the obvious cases but also those which, as Dr. Watkins has pointed out, are more defiant of diagnosis. Certainly today, when we demand rapid fire service, whether it be in a shopping center or in the doctor's office, this is a topic of prime importance in the effective practice of medicine.

Current Thought on Congenital Heart Disease In Infancy*

• The infant with malformation of the heart, as the author states, is a real challenge not only as regards diagnosis, but treatment of the condition be it medical or surgical.

J. L. REYNOLDS, M. D.
Baton Rouge

THE infant with congenital heart disease in many instances continues to present a real challenge. Both in regard to diagnosis and treatment it is this age group, the first year of life, which represents the problem area. The scope of this problem is often not fully appreciated. It is a startling fact that approximately one-half of babies born with a cardiac defect will die before reaching the age of one year.[1-3] Ninety per cent of children who go into heart failure do so during this critical first year of life.[4] Since surgical relief is possible for a majority of the anomalies present in this age group the problem is a pressing one.[5]

Diagnosis

Although great strides have been made during the last decade in the diagnosis of cardiac malformations, diagnosis in the infant is still difficult. The specific type of anomaly present may be either complex, unusual, or severe, and multiple anomalies existing in combination are more likely. Physical findings are frequently quite different in the infant as contrasted to the older child or adult. This is primarily due to different and sometimes changing hemodynamics during the early infancy period. High pressure in the right ventricle and pulmonary artery is frequently found, and prevents or alters the auscultatory findings usually associated with certain lesions such as ventricular septal defect and patent ductus arteriosus.

Cardiac failure may obscure physical diagnostic signs. For example, in coarctation of the aorta the blood pressure in the upper and lower extremities tend to equalize, while the infant is in uncompensated congestive failure. The infant with severe pulmonic or aortic stenosis in failure with a very low cardiac output may have no murmur.

Certain physical signs valuable in diagnosis may require time for their manifestation. The characteristic late appearance of the pulmonic ejection murmur in atrial septal defect is probably contingent, at least partly, upon dilatation of the pulmonary artery which takes some time to occur. Diagnosis by physical examination in an infant is thus frequently less precise than in an older child. Likewise pathagnomonic E.K.G. and x-ray findings often require time to evolve. Laboratory procedures employed in diagnosis are technically more difficult in the infant, and yet must often be more extensive due to the complexity of the anomalies found.

As an example of the contrast in clinical and hemodynamic features which may exist between an infant and an older child with the same lesion, consider two such patients with total anomalous pulmonary venous connection. The majority of individuals with this anomaly die during the first several months of life, but the classical description of the condition, inapplicable to the infant, is drawn from the few surviving older patients. The older child with this condition is acyanotic or only slightly cyanotic, may be relatively asymptomatic, has large heart on x-ray with marked increase in pulmonary vascularity,

* Presented at the Eighty-first Annual Meeting of the Louisiana State Medical Society, May 10, 1961, New Orleans.

and is found to have a very large left to right shunt at catheterization with perhaps only slight increase in right ventricular and pulmonary arterial pressure. In contrast the 2 month old infant who presents with severe dyspnea, congestive failure, is quite cyanotic, and has a normal size or only slightly enlarged heart without conspicuous increase in pulmonary vascularity.

At catheterization the infant is found to have only a moderate left to right shunt and high pressure at systemic arterial level in the right ventricle and pulmonary artery. The findings are obviously quite different in these two individuals with ostensibly the same anomaly. The explanation for this is found in a different anatomy and physiology involved. It has been shown that the prognosis for survival in uncomplicated total anomalous pulmonary venous connection depends on the length and diameter of the channel draining the pulmonary veins, and on the size of the opening in the atrial septum.[6] Either a small atrial septal opening, or a long and/or narrow common pulmonary venous channel, the resistance along which is inversely proportional to the 4th power of its radius and directly proportional to its length, will cause pulmonary venous hypertension. The clinical picture described in the infant example above is due to pulmonary hypertension. Pulmonary venous hypertension has been shown to exist, incidentally, in the supra- as well as the subdiaphragmatic type of anomalous veins.[7] The surviving older child or adult will be found to have a large atrial defect, a short, unobstructed route of drainage of the pulmonary veins, and pulmonary venous hypertension is not present.

Certainly progress is being made in this infant age group under discussion. Accurate preoperative anatomical diagnosis has contributed substantially to this and is essential. However, it is now becoming increasingly evident that the infant with congenital heart disease must be understood hemodynamically and physiologically as well as anatomically. A case in point is that of the anomalous left coronary artery arising from the pulmonary artery. Until recently emphasis was directed to some method of transplanting the anomalous left coronary to the aorta, since it was assumed that the myocardium was being supplied by unsaturated blood from the pulmonary artery. It is now recognized that hemodynamically this anomalous coronary artery functions as an A-V fistula. Right coronary artery blood is shunted into the left coronary artery and from here into the low pressure pulmonary artery. This left-to-right shunt results in a draining of blood from the myocardium and a reduction of perfusion pressure in the coronaries.

Once the physiology is understood it becomes obvious that simply ligating the anomalous artery at its origin from the pulmonary artery is an effective maneuver. Several infants have now been salvaged for the first time by use of this technique.[8]

Surgical Techniques

A brief consideration of surgical procedures employed during infancy will follow. In general the extracorporeal pump oxygenator has had only limited usefulness in small babies. A weight of 20 to 30 pounds is usually considered requisite for using this machine. However it is potentially useful, and probably in the near future satisfactory techniques will become available for the infant. Temporary, palliative measures must frequently be employed in the meantime until the advent of a safe complete repair procedure. Hypothermia and deep hypothermia are being employed increasingly and allow more prolonged and extensive operations. Another generalization that can be made is that babies with pulmonary hypertension fare less well, and if pulmonary arterial resistance is significantly elevated operation is best avoided.

Division or ligation of a patent ductus resulting in cardiac failure is now undertaken with relative safety at the time this lesion is discovered, regardless of age. An asymptomatic patent ductus arteriosus may be repaired after infancy. When a

large ventricular septal defect exists with a patent ductus arteriosus it may be quite hazardous only to divide the ductus.[9]

Resection of a coarctation of the aorta can be done in infancy but the mortality is very high.[10] Intensive medical management is recommended if possible.[11, 12] Most of the coarctations that present in infancy are the preductal type and there is a high incidence of associated cardiac defects. Keith et al[21] stress early surgical intervention if medical treatment is not dramatically successful in the case of infants less than one month of age.[10]

The Brock pulmonary valvotomy is dramatically successful when used for infants with severe pulmonic valvular stenosis. It is sometimes necessary and worthwhile to perform this procedure on an emergency basis. For individuals old enough the extracorporeal pump oxygenator offers a better approach to the pulmonary valve and is a more thorough procedure than the Brock operation.

Pulmonary artery banding is an effective temporary maneuver for carrying some babies with very large left to right shunt through infancy. It has been undertaken in infants with large ventricular septal defect. If medical treatment of these infants is insufficient, banding offers the only good alternative treatment. It can perhaps also be employed in other conditions wherein disability is due to pulmonary pleonemia. Transposition of the great arteries with ventricular septal defect and large pulmonary flow is one example, and certain types of truncus arteriosus with large pulmonary flow is another. The band can apparently be easily removed if the surgeon undertakes total repair at a later date.

The Blalock-Taussig and Potts systemic-pulmonary anastomoses are still used for infants with Tetralogy of Fallot and other anomalies associated with marked restriction of pulmonary flow and a ventricular septal defect. Life-saving results can sometimes be attained. Since a more satisfactory anastomosis can be obtained when vessels are larger, it is better to postpone this operation until after in infancy, if medical management is adequate to permit this. The Blalock-Taussig type anastomosis is currently more in favor, since it is probably easier to take down than a Potts procedure when complete repair is later done. The newer Glenn anastomosis between the superior vena cava, ligated at its junction with the right atrium, and the distal end of the right pulmonary artery may come into greater use. It offers the theoretical advantage of less work for the right side of the heart and no increase in work on the left side as occurs with the other anastomoses. Since cardiac failure is sometimes seen after a Potts procedure, perhaps the Glenn anastomosis offers an advantage. Blood flow into the right pulmonary artery is said to equal 30 per cent of the systemic venous return. Gasul, et al, have recommended this operation in certain patients with Ebstein's anomaly and congenital hypoplastic right ventricle.[15] More experience with this method is awaited.

Operation in infancy is necessary for those babies with total anomalous pulmonary venous drainage who have severe failure and/or pulmonary venous hypertension. Mortality statistics are not favorable at this age, but operative correction by implantation of the pulmonary veins into the left atrium is the only hope since these babies almost invariably soon die.

Several procedures now exist for treatment of transposition of the great arteries. The Blalock-Hanlon operation the creation of a large atrial defect, may help some of those with intense cyanosis and an intact ventricular septum survive longer and perhaps until a definitive repair is available. Baffes has recently reported the results of his technique on 148 patients.[16] Mortality was 8.3 per cent and 70 per cent of the survivors definitely benefitted. These are the most impressive results on the surgical treatment of transposition that have been published. It is hoped that results on a larger series will be as encouraging. The procedure entails routing of inferior vena cava blood to the left atrium either by direct anastomosis

or a Teflon prosthesis, and anastomosing the right pulmonary veins to the right atrium.

The Senning procedure[17, 18] has occasioned much recent interest. Senning has reported one successful repair, and Kirklin has had 4 patients survive and benefit using this approach.[19] The plastic procedure consists essentially in a functional and partly an anatomical "transposition of the atria so that the pulmonary veins drain through the tricuspid valve and the systemic venous return is directed through the mitral valve. If a ventricular septal defect is associated it is corrected, also. Further reports on this technique are awaited since results seem promising.

It is important in considering transposition of the great arteries that it not be thought of as one disease. Depending on the associated anomalies, ventricular septal defect, patent ductus arteriosus, atrial septal defect, pulmonic stenosis, etc., and the pulmonary vascular resistance, one patient may be quite different from another clinically and physiologically.[20] The different types may well require different management. Those individuals with associated pulmonic stenosis and pulmonary vascular obstruction account in the main for the small minority who survive beyond six months of age and they require surgical help less urgently than the others.

If pulmonary resistance is high, operation has little to offer. If pulmonic stenosis is severe enough to significantly reduce the pulmonary blood flow a shunt procedure such as a Blalock-Taussig anastomosis may significantly help. If pulmonic stenosis is not severe the Baffes or Senning procedure may be utilized. If arterial oxygen saturation is approximately 80 per cent or above the Baffes procedure will not help significantly. These patients have difficulty because of a very large pulmonary blood flow and pulmonary banding may be helpful. The Baffes and Senning procedures are ideal for those individuals without an associated ventricular septal defect. The approaches mentioned in treatment of transposition represent a step forward since 90 per cent of patients with transposition of the great arteries formerly died by seven months of age.[21]

Summary

Current thought on infants with congenital heart disease is reviewed. That the infancy period presents the greatest problems in both diagnosis and treatment is attested by the fact that 50 per cent of all babies born with heart disease die before 1 year of age.

The difficulties with differential diagnosis in this age group are discussed; the different clinical profile and physiologic behavior of cardiac defects in the infant as compared with the older child and adult is stressed.

Hemodynamic understanding of the disturbed physiology present in the individual case is encouraged as a requisite for deciding proper treatment.

Finally, the common and newer surgical techniques employed in the infancy age group and their current place in management, are discussed.

Special emphasis is placed on operative intervention in transposition of the great arteries.

References

1. Richards, M. R., et al: Congenital Malformations of the Cardiovascular System in a Series of 6,053 Infants, Pediatries, 15:12, 1955.

2. MacMahon, B., et al: British Heart J. 15:121, 1953.

3. Rowe, R. D., and Cleary, T. E.: Congenital Cardiac Malformation in the Newborn Period—Frequency in a Children's Hospital, Canadian M. Asso. J., 83:299, 1960.

4. Keith, J. D.: Congestive Heart Failure, Review Article, Pediatrics, 18:491, 1956.

5. Adams, F. H.: Congenital Heart Disease, Comments Regarding Incidence and Natural History, California M. J., 90:213, 1959.

6. Burroughs, J. T. and Edwards, J. E.: Total Anomalous Pulmonary Venous Connection, Amer. Heart J., 59:913, 1960.

7. Hauck, A. J., Rudolph, A. M. and Nadas, A. S.: Pulmonary Venous Obstruction in Infants With Anomalous Pulmonary Venous Drainage (Ab.) Circulation, 22:761, 1960.

8. Sabiston, D. C., Jr., et al: Myocardial Infarction in Infants—The Surgical Management of a Complication of Congenital Origin of the Left Coronary Artery from the Pulmonary Artery, J. Thor. & Cardiov. Surg., 40:321, 1960.

9. Sasahara, A. A., et al: Ventricular Septal Defect with Patent Ductus Arteriosus. A Clinical and Hemodynamic Study, Circulation, 22:254, 1960.

10. Glass, I. H., Mustard, W. T. and Keith, J. D.: Coarctation of the Aorta in Infants, Pediatries, 26:109, 1960.

11. Freundlich, E., Engle, M. A. and Goldberg, H. P.: Coarctation of the Aorta in Infancy—Analysis of a 10

Year Experience with Medical Management, Pediatrics, 27:427, 1961.

12. Lang, H. T. and Nadas, A. S.: Coarctation of the Aorta with Congestive Failure in Infancy: Medical Treatment, Pediatrics, 17:45, 1956.

13. Glenn, W. L., and others: Circulatory By-Pass of the Right Side of the Heart VI, Superior Vena Cava-Right Pulmonary Artery Anastomosis: Experimental Background and Clinical Application, Circulation, 22:755, 1960.

14. Glenn, W. L.: Circulatory By-Pass of Right Side of the Heart. New England J. M., 258:117, 1958.

15. Gasul, B. M., et al: Superior Vena Cava-Right Main Pulmonary Artery Anastomosis: Surgical Correction for Patients with Ebstein's Anomaly and for Congenital Hypoplastic Right Ventricle, J.A.M.A., 171:1797, 1959.

16. Baffes, T., et al: Surgical Correction of Transposition of the Great Vessels: A Five Year Survey, J. Thor. & Cardiov. Surg., 40:298, 1960.

17. Senning, A.: Surgical Correction of Transposition of the Great Vessels. Surgery, 45:966, 1959.

18. Jonsson, B., Ovenfors, C. and Senning, A.: Surgically Corrected Case of Transposition of the Great Vessels. Acta Chirurgica Scand., Suppl., 215:297, 1959.

19. Ongley, P. A.: Personal Communication.

20. Noonan, J. A., Nadas, A. S., Rydolph, A. M. and Harris, G. B. C.: Transposition of the Great Arteries: A Correlation of Clinical, Physiologic, and Autopsy Data. New England J. Med., 263-592, 637, 684, 739, 1960.

21. Keith, J. D., Rowe, R. D. and Vlad, P.: Heart Disease in Infancy and Childhood. Macmillan Company, New York, 1958, p. 501.

Threat to New Drug Research

It has been the experience of my company that the cost of development of a new drug for marketing is approximately five million dollars. I might add that the cost of other major pharmaceutical houses is about the same as ours. If it is made more difficult and more costly to bring new drugs to market because of added red tape and restrictions—if a new drug can be barred because of conflicting views, honestly held but involving subjective judgments on its effectiveness—research is seriously threatened and indeed may be effectively foreclosed in the case of drugs for serious diseases which are not highly prevalent. It is vitally important that development of new products of potential public significance not be shut off for such reasons, for the result will be to hamper seriously progress in the conquest of disease and the prolongation of life.—Theodore G. Klumpp, M. D., President, Winthrop Laboratories, to House Interstate and Foreign Commerce Committee, August 20, 1962.

Recurrent Pulmonary Infarction, Partially Masked by Antibiotic Therapy

• A case is reported, which was treated by ligation of the inferior vena cava and ovarian veins.

HARRY B. GREENBERG, M. D.
New Orleans

IN the following case signs and symptoms of pulmonary embolism occurred four weeks after a vaginal hysterectomy. The source of the pulmonary emboli, thrombophlebitis of the ovarian veins, was not apparent on early physical examinations, probably having been masked by antibiotic treatment. Recurrent pulmonary embolism and infarction caused increasing respiratory distress, until the inferior vena cava was ligated twenty-nine days later. Treatment with anticoagulant agents, started late in the course of the disease, was ineffective.

Case Report

This 34 year old school teacher entered the hospital because of dyspnea, orthopnea, cough, fever and pleuritic chest pain. Fifty-seven days before, a vaginal hysterectomy was performed because of uterine fibroid tumors and chronic cervicitis. After the operation she received procaine penicillin and streptomycin for three days, as a preventive measure.

Four weeks later, she experienced chills, fever, a non-productive cough and bilateral chest discomfort. She was treated, at home, with antibiotics; nevertheless, the cough and an intermittent, low grade fever persisted. Anorexia, weakness and exertional dyspnea occurred. Her chest discomfort increased and she had pain, which extended along both lower costal margins, on coughing and deep inspiration. Subsequently, the cough became productive of a scant, white mucopurulent sputum which was streaked with dark blood on two occasions.

Digitalis was given, and treatment with anticoagulants started; however, the cough became more frequent and painful, and dyspnea became increasingly disabling.

On admission to the hospital, the examination showed a tense, cyanotic woman who appeared acutely ill. Her respirations were rapid, shallow and labored. Oxygen, administered through a nasal catheter, only partially relieved her dyspnea. She had a persistent cough productive of a scant mucopurulent sputum. On auscultation of the chest, fine rales were heard over both lower lung fields, posteriorly. There was slight tenderness to deep palpation over the lower, right quadrant of the abdomen.

A chest x-ray, Figure 1, showed linear densities, suggestive of lobular atelectasis, and round-



Figure 1. Posteroanterior view of chest: Nodular densities with ill defined margins are present in the lower lobes of both lungs. The diaphragms are elevated, and there are small, bilateral, basal pleural effusions.

ed areas of increased density with ill defined margins in the lower lobes of both lungs; there were small, bilateral, basal pleural effusions and both diaphragms were elevated.

After the prothrombin content of her blood was brought to a normal level by the administration of vitamin K 1, (Mephyton), a laparotomy was performed. The right ovary was enlarged,

soft, and cystic; there were many thick, fibrous, tubo-ovarian adhesions; the ovarian veins were thickened, dilated, and tortuous.

The ovaries and fallopian tubes were excised, the ovarian veins and inferior vena cava were ligated, and the ovarian venous plexus excised. Gross and microscopic examinations of the resected specimen showed the ovarian veins filled with partially organized thrombi. A culture of this material was sterile.

After operation her respiratory distress quickly diminished. The pulmonary rales, cough, and pleuritic chest pain subsided; oxygen administration was discontinued. At the time of her discharge from the hospital seventeen days later, she was ambulatory and asymptomatic. Subsequently, chest x-rays, Figure 2, showed resolution of the pulmonary infiltrates.

Comment

In this patient, recurrent pulmonary infarction was caused by emboli from the pelvic veins. After the vaginal hysterectomy a suppurative pelvic infection occurred which was probably masked, and later arrested, by the antibiotics she received after the operation, and after she had returned home. The thrombophlebitis which developed in the ovarian veins was accompanied by slight local evidence of inflammation. Anticoagulant therapy, administered late in the course of the illness, was ineffective. Ligation of the ovarian veins and inferior vena cava arrested the recurrent pulmonary embolism and infarction which caused increasing respiratory insufficiency.



Figure 2. Chest film, 1½ years later. The parenchymal infiltrates have resolved; elevation and flattening of the right hemidiaphragm and blunting of the right costophrenic angle are the residuals of the old pleural reaction.

Cough, fever, chest discomfort, and increasing dyspnea due to recurrent pulmonary embolism may occur weeks or months after an operation. And, if there is slight local evidence of phlebitis of the pelvic or leg veins, these symptoms may be attributed to pulmonary infections. In his study of staphylococcal bacteremia, Meade[1] observed that antibiotic therapy could convert an acute bacteremic infection into a slowly progressive one with few local signs and symptoms. In such cases, when a source of pulmonary emboli is not apparent, an early diagnosis of pulmonary infarction may be a clinical exercise.

The roentgenographic signs of postoperative pulmonary infarction may be absent, or may appear later after additional infarction or infection occurs.[2] Wright and Foley[3] noted that the x-ray appearance of postoperative pulmonary infarction was frequently confused with that of viral pneumonia or postoperative atelectasis. Often multiple, small, pulmonary infarcts appear on the chest x-rays as hazy clouding or streaking at the lung bases. When closely grouped, larger infarcts may appear as homogenous densities with poorly defined margins resembling bronchopneumonia or pulmonary metastases.[4-6]

Summary

A 34 year old woman had recurrent pulmonary infarction after a vaginal hysterectomy. The early signs of pulmonary embolism, which appeared four weeks after operation, were mild chest discomfort, non-productive cough and fever. The source of the pulmonary emboli was a thrombophlebitis of the ovarian veins which was accompanied by slight local evi-

dence of inflammation. This was attributed to the suppressive action of antibiotics given after the operation. Anticoagulant therapy, administered after respiratory insufficiency had occurred, was ineffective. Ligation of the inferior vena cava and ovarian veins arrested further pulmonary embolism; the respiratory distress subsided quickly.

References

1. Meade, R. H.: Staphylococcal Bacteremia and Endocarditis, Circulation, 19:440, 1959.
2. Davison, K.: Abscess Following Aseptic Pulmonary Embolism, British J. Tuberc. & Dis. Chest, 52:149, 1958.
3. Wright, I. S., and Foley, W. T.: Pulmonary Embolism and Infarction, Am. J. Surg. 90:440, 1955.
4. Perkins, R. B., and Bradshaw, H. H.: Pulmonary Infarction Mistaken for Bronchogenic Carcinoma, J.A.M.A. 151:545, 1953.
5. Short, D. S.: Radiological Study of Pulmonary Infarction, Quart. J. Med. 20:233, 1951.
6. Hussey, H. H.: The Pathogenesis of Septic Pulmonary Embolism, M. Clin. N. America, 1751 (Nov.) 1950.

A Great Detriment to Public Health

Today tuberculosis, pneumonia and other scourges of the recent past are no longer among the top ten killers, due largely to break-through in drug therapy. But we are still confronted with the scourge of diseases such as heart disease, cancer, mental illness, neurological disorders and many others. I am sure no one of us would wish to retard much-needed research leading to new drugs or in any way to delay the availability of existing drugs for cancer and other uncured ailments. Keeping a useful drug off the market or unduly delaying its marketing may frequently in itself be a great detriment to public health. Today we regard the drugs of 1942 as outmoded. It is to be hoped that the doctors of 1982 will consider the drugs of 1962 just as outmoded. That can be accomplished only by continuation of the present dynamic drug research program.—Chester S. Keefer, M. D., Director, Boston University-Massachusetts Memorial Hospitals Medical Center, to House Interstate and Foreign Commerce Committee, August 20, 1962.

The Diagnosis and Treatment of Skin Tumors*

• The author gives a resume of the malignant and benign tumors that may occur.

JOE C. TILLEY, M. D.†
Baton Rouge

PILLSBURY[1] opens the chapter on Tumors of the Skin in his book with the following quotation. "Most adult human beings present one or more types of tumors of the skin or subcutaneous tissue. With aging, the number and variety of such tumors increase, they are as inescapable as dental caries. Fortunately, the overwhelming majority of tumors of the skin are completely benign."

Fortunately, for the patient, most tumors are clinically characteristic. The clinician who is experienced in these tumors can very accurately diagnose these lesions, and the clinicopathologic correlation will be high. The skin is a very accessible organ, and the early detection and treatment of tumors of the skin should be performed with greater accuracy than with any other other organ of the body.

For the purposes of this paper, the discussion will be limited to the common tumors of three large groups: the benign, the premalignant, and the frankly malignant tumors.

Nevus

The most commonly seen tumor in the benign group of tumors is the nevus or common mole. These tumors are those which are composed of nevus cells. Clinically the nevus may be either pigmented or non pigmented, may be flat with the surface of the skin or may be elevated or pedunculated. Histologically, they are classified according to the location of the nevus cells in the skin. Thus we have intraepithelial nevi, junctional nevi (at the dermo-epidermal junction), dermal nevi, and compound nevi which implies that the cells are both dermal and epidermal in location. The ones that are the most common clinically are the dermal nevi. These are frank tumors and may vary in size and consistency. They are benign lesions. The junctional nevus is the most menacing to the clinician. Clinically, it presents as a darkly pigmented macule, although it is not infrequently slightly elevated above the skin surface. The most important consideration in the management of these lesions is the histological diagnosis. Every lesion removed should be sent into the laboratory for tissue diagnosis. Even the sharpest clinician will miss the diagnosis on these lesions. Periodically, the pathologist sees basal cell carcinomas, amelanotic melanomas, and frank melanomas which have been sent in as nevi. The general aim of treatment is to destroy the lesion. One should remember to tell the patient that a scar will be the end result regardless of the method utilized. Excision is the preferred method of treatment. Hemostasis after excision may be promoted by electrocoagulation or dessication, or by the use of sutures. Most nevi which are repeatedly traumatized or lie in pressure areas should be removed. There is some variance with the preceding statement, especially where a nevus has been present all of one's life. Some people advocate the removal of all junctional nevi on the palms and soles as well as the genitalia. The rate of malignant degeneration of nevi is unknown at the present time.

Hemangioma

Another benign tumor to consider is the hemangioma. Clinically, there are two types of lesion to consider, the first being a tumor which appears at or shortly after

* Presented at the Eighty-second Annual Meeting of the Louisiana State Medical Society, May 9, 1962, Monroe.

† Baton Rouge, Louisiana, Clinical Instructor, Department of Dermatology, Louisiana State University School of Medicine.

birth and grows rapidly. The other type is the dark red lesion which is flat and shows no variation as to growth. (The rapidly growing tumor will cause parents alarm and because of the rapid growth they will bring pressure on the practicing physician to treat these lesions.) If a general statement can be made about the treatment of these lesions, it is that they should be followed closely for no less than six months with careful observation and measurement. Possibly the one exception to this general statement would be those lesions which are located about an orifice. If treatment is employed, the parents should be warned that a scar will result. The methods which may be utilized are irradiation, sclerosing agents such as sodium morrhuate, and other agents such as carbon dioxide. If surgery is indicated it should be performed by a surgeon who is adept at plastic procedures. Most of these lesions disappear within the first three or four years of life, thus the reason for the careful observation.

It should be stated very emphatically that the flat hemangioma or portwine stain needs no treatment. These lesions are usually extensive, and if any treatment is to be employed it should be stepwise plastic surgery. One of the best methods to use is one which merely covers it up. There is a preparation on the market today, Covermark®, which does a beautiful job of covering these lesions. One can be amazed at how early an age and how adeptly a three or four year old can utilize these preparations. Too, they are waterproof if applied properly.

Seborrheic Keratosis

The last of the benign conditions which shall be considered here is the seborrheic keratosis. These lesions can best be described as having the appearance of dirty grey wax that has been dropped on the skin. Common variations of this appearance are those which are verrucous, and those which are pigmented. They occur only in adults and are seen with greater frequency as age increases. They may occur on any part of the body including the face and scalp. They have a "pasted-on" appearance on the skin surface. The numbers of these tumors which can be present on the body surface is amazing. Some of the tumors may disappear with keratolytic ointments and rather vigorous scrubbing. It may be necessary to use a skin currette to remove these lesions and hemostasis can be promoted with pressure or by electrodessication. Many are so superficial that they can be removed without anesthesia. Again, these lesions should be examined by the pathologist. Even the sharpest dermatologist occasionally confuses these lesions clinically, and instead of a seborrheic keratosis, he gets back a report of basal cell carcinoma or even a squamous cell carcinoma.

Premalignant Lesions

The next category for consideration are the premalignant lesions. The first of these lesions for discussion is the senile keratosis. These lesions show great variation in clinical characteristics, from the erythematous, slightly scaly macule to the thickly crusted indurated tumor which may be highly suspicious of a fast growing malignancy. The same variation may be seen under the microscope, from minimal atypism of the epidermal cells to a lesion which is so borderline that pathologists will be at variance. Some of the lesions in the mild form will show regression with frequent lubrication, while others may require extensive destruction.

One should make a few general remarks about these and other lesions of the premalignant and malignant group. The fair-skinned, blue eyed, blond individual is the more frequently affected, but the olive-skinned brunette is not immune to these lesions. Both premalignant and malignant lesions occur more frequently on the exposed surfaces, but may occur on the covered surfaces of the body. Persons whose occupation requires them to be outside most of the time such as farmers, or sailors, as well as those persons whose hobbies carry them outside are more susceptible. They occur with increasing frequency after thirty years of age.

Premalignant lesions obviously must be destroyed either by means of dessication and curretage or by surgical means. For previously stated reasons, these senile keratoses should be examined under the microscope. Many of these lesions show the changes of early carcinoma-in-situ.

Under the classification of premalignant lesions the next tumor for consideration is leukoplakia. Leukoplakia are white tumors which occur on the lips and vulva, and are probably senile keratoses altered only by location. On the lips they are white and may have a verrucoid component, while those on the vulva are usually moist to touch. Leukoplakia of the lip occurs more frequently in those patients who smoke.

Bowen's Disease

One of the most superficial malignant tumors is carcinoma-in-situ or Bowen's disease. Bowen's disease is the entity which is viewed most frequently on the covered surfaces. Clinically, they appear as well marginated erythematous scaly tumors. They occur most frequently after forty years of age as do all malignant tumors. Multiple carcinoma-in-situ may may be the end result of long term therapy with the arsenicals, such as those in Fowler's solution and those used in the treatment of asthma.

The most common form of skin malignancy is the basal cell carcinoma, occurring four or five times more frequently than does squamous cell carcinoma. Clinically basal cell carcinoma is a tumor with fairly discrete borders which are rolled and pearlescent in color. The tumor frequently ulcerates in the center, apparently outgrowing its blood supply. Basal cell carcinomas do not ordinarily metastasize. These epitheliomas may grow down to the fascia, invade through the fascia and spread to the limiting area of this fascial plane. Depending on the size and location of the tumor, several modalities may be utilized for treatment. These modalities are surgical excision, irradiation either with radium or x-ray, electrodessication and curretage, and the combination of the above. The experienced clinician will individualize each case and use that modality best suited for the tumor. A knowledge of the growth patterns of the tumors is needed before treatment is undertaken. The results of the use of the various modalities is about equal, the cure rate varying from 95 to 100 per cent. The reason for recurrences is inadequate knowledge of the growth pattern of the tumor, timidity in use of the methods of treatment, and use of inappropriate methods of treatment.

Squamous Cell Carcinoma

The more severe form of skin cancer is squamous cell carcinoma. The borders of this lesion are less discrete and the tumor may be more indurated and deeper in the skin. They may be crusted and ulcerated. They may metastasize either to the regional nodes, or may be responsible for distant metastases. Before one manipulates such a lesion or biopsies such a tumor, one should always feel for regional nodes. After the lesion has been biopsied or manipulated, then one has little idea whether the nodal enlargement is due to neoplastic or inflammatory processes. Inflammatory nodes do not always respond as rapidly as one would like. This helps to eliminate radical surgery in those patients who have inflammatory nodes due to the treatment or manipulation. Probably the best therapeutic tool to use in the treatment of squamous cell carcinomas is surgical excision, although irradiation may be the method of choice in certain tumors of this type. Dessication and curretage should probably be used with caution in squamous cell carcinoma. The final diagnosis in these three malignancies is of course a histological one.

Malignant Melanoma

A much less common form of skin malignancy is the malignant melanoma. The diagnosis of this lesion is not always easy clinically, but one can of course have a high index of suspicion. The question arises as to whether a simple biopsy should be performed on these tumors. If possible, a biopsy with wide excision of

the lesion should be performed. There is probably no danger in biopsying these tumors, but many people feel differently. The diagnosis once made means radical surgery. A lesion that must always be considered under this heading is the malignant lentigo of Hutchinson. The tumor is usually seen in older people and there is a history of rapid growth. Malignant lentigo is usually seen on the face. Histologically, they are confined to the epidermis and are located high in the epidermis. This diagnosis usually is a difficult one to make and the clinician is the key figure in making the diagnosis. The prognosis is generally much better in these tumors.

Summary

A discussion of the classification and diagnosis of skin tumors has been presented. Comments on the differential diagnosis have been made. Stress has been placed on the importance of the histological diagnosis under each heading. The treatment for each tumor has been presented and stress has been placed on the individualization of the treatment to each tumor.

Reference

1. Pillsbury, D. M., Shelley, W. B. and Kligman, A. M.: Dermatology, Philadelphia, Saunders, 1956.

Discussion

Dr. Fred C. Grieshaber (New Orleans): Dr. Tilley has given a classification of the more commonly seen skin tumors and summarized both the differential diagnoses and treatment.

In planning a discussion of his paper, it seemed best to review my own experience in handling each problem. The common mole is surely seen more frequently than any other type and it becomes necessary to decide whether it should be removed or left alone. In most cases, the latter seems to be the correct decision but in the event there is the least suspicion as to it's benign nature, surgical excision for histopathological examination would be indicated.

Under observation and in time, hemangiomas appear to regress; in those located about the orifices, small doses of x-ray will bring about involution. Seborrheic keratoses respond nicely to superficial curretage followed by light cautery of their base.

It has been my experience that though superficial senile keratoses appear to clear with emollients, they ultimately return and one may find slice biopsy followed by light dessication very effective and cosmetically acceptable. In the event the pathology report indicates malignant transformation, then they are treated as basal or squamous cell carcinomas, using either x-ray or surgical excision, the latter being preferred in the younger age groups.

Bowen's disease is a special case and responds adequately to electrosurgical destruction. Lastly, malignant melanoma always warrants complete and wide surgical excision, followed by regional node dissection as indicated

I am in accord with Dr. Tilley in regard to the need for individualization of treatment and the use of the histopathological section in cases where there is the slightest doubt.

It was a pleasure to have this opportunity to discuss Dr. Tilley's paper.

Drug Research Increased

Despite the harassment of a prolonged investigation often characterized by sensationalism, the pharmaceutical industry spent 13 per cent more on research and development in 1961 than in the year previous. The pharmaceutical industry's investment in research is now three times that of average industry. In the period from 1959 to 1961 nearly 500 scientists were added to the staffs of 23 larger companies. . . . The industry's faith in its competence is well founded on past performance. It will be supported by those it serves.—Editorial in **New York State Journal of Medicine**, Sept. 1, 1962.

Psychiatric Manifestations of Sheehan's Syndrome*

• Supported by a review of a case report from the record of Charity Hospital of Louisiana at New Orleans.

WELLS BUDDINGTON, M. D.
New Orleans

Literature

IN 1949, Sheehan summarized 95 cases of panhypopituitarism from autopsy reports, and related the etiology of many of these to postpartum hemorrhage. Under mental symptoms he listed mental torpor, loss of initiative or interest in home and friends, and surprisingly little desire to return home from the hospital. In addition, however, he noted that 22 patients showed delusions, frequent depressions, and rare mania which he attributed to the probable combination of hypothyroidism and hypoglycemia. He stated in summary that

"It is open to question whether the relatively high incidence of mental derangement is a true one." [1]

Since Sheehan wrote the above classical observations of the syndrome now associated with his name, many additional case reports have appeared in the literature confirming his observations on the pathological findings and the somatic symptoms he described.

However, few cases or even comments have appeared in the American literature concerning the occurrence of neurotic or psychotic symptoms coincident with this syndrome. Selye, in 1950, while discussing stress and hormone function in general, concluded that the co-existence of disordered endocrine mechanisms with psychoneurotic or psychotic states suggests some relationship between pituitary-adrenal activity and mental processes.[2] In Australia, Lloyd emphasized that general practitioners and psychiatrists need be on the lookout for the diagnosis of Sheehan's since anxiety, depression, or mental deterioration may be the presenting symptoms." [3] In England, Blaw recently reported a single case of Sheehan's in which the patient developed a psychotic episode characterized by "apathy, restlessness, shouting and aggressive outbursts with fluctuations in mood from tearful agitation to suspicion and euphoria. Although this patient showed orientation, concentration and memory defects, she made a complete recovery on cortisone with a four month follow-up. Because of the coincident onset with coma and hypoglycemia with hypotension, Blaw felt that these factors may have been the explanation for the 'organic psychosis.' " [4]

Charity Hospital Records

In 1959, Dr. Joseph Dingman of the Tulane Endocrinology Department drew my attention to the occurrence of a number of cases of Sheehan's syndrome attending the Charity Hospital clinics who had also developed varying psychiatric symptomatology.

Review of the Charity Hospital records since 1957 revealed some 11 cases of Sheehan's, of which 8 had at some time experienced psychotic episodes, 2 had suffered various "nervous" complaints and only one was apparently free of nervous or mental symptoms. These psychotic episodes were by no means limited to typical organic brain syndromes, but on the contrary ranged from depression, paranoid delusions, hysterical attacks, catatonia and schizophrenic-like pictures. Several were misdiagnosed as functional mental illness and one received several courses of E.S.T. in a state hospital. With some of the patients, typical psychiatric symptoms con-

* Presented at the Eighty-second Annual Meeting of the Louisiana State Medical Society, May 8, 1962, Monroe.

Associate Professor of Psychiatry, Tulane University School of Medicine.

tinued for years before an acute episode revealed the true diagnosis. There was no universal relationship with hypoglycemic or hypotensive episodes as suspected by Blaw, although this was true in several cases with accute organic brain syndromes. One patient died after an acute hypotensive attack. All other cases seemed to clearly respond to therapy directed at hormone replacement and with follow-ups extending up to three years no case has shown a deterioration in the psychiatric picture.

Case Report

The patient is a 29 year old housewife first admitted to Charity Hospital on December, 1961. She had been a known diabetic since age 15, but was in fairly good health until her last child was delivered in 1957 by Cesarean section in another hospital because of breech presentation. We have no certain history of hemorrhage; however she received 1500 cc. of blood immediately postpartum and an atmosphere of emergency accompanied the operation. After delivery she developed the typical symptoms of hair loss, failure to lactate or menstruate, loss of libido and energy with intolerance to cold.

This situation continued for several years during which time the patient's insulin requirements dropped from 70 units to 10 units daily. In retrospect, her husband described her as apathetic, avoiding housework, social contacts and sexual relations while depending heavily on him.

Several months prior to admission she began to accuse her husband of infidelity and several days prior to admission became confused in her thinking, preoccupied with the meaning of things and suspicious of her husband's intentions. She developed the idea that he was really two people and then suspected that one of these was actually Satan, so that she fled from the house in fear, contacting several priests for assistance. She felt like her voice sounded strange and she answered questions evasively because she was unsure of her own feelings and perceptions. After describing to her family the vision of a strange light on her left shoulder she was taken to the family physician who sent her to Charity Hospital with the diagnosis of "schizophrenia."

The patient was admitted on a roller in semi-stupor, fairly well oriented but speaking poorly and with considerable effort. Her replies to questions were frequently tangential and her associations loose, while her mood was apprehensive and depressed. At times her affect was quite flat and the resident psychiatrist might well have agreed with the diagnosis of schizophrenia if the husband had not been convincing in his opinion that the patient had not shown previous evidence of mental illness.

On December 24, the patient went into shock, which was treated by fluids, solu-cortef and sugar for the hypoglycemia. With gradual thyroid treatment plus cortisone and estrogens the sensorium gradually cleared and hallucinations ceased. The patient, however, continued to be quite introspective, preoccupied about her relationship with her husband and puzzled as to the real explanation of her recent experiences.

By January 1962, approximately one month postadmission, her general physical condition was much improved and the patient was without physical complaints although she continued to spontaneously bring up family problems during interviews and showed obvious ambivalence regarding discharge from the hospital.

At present (four months after treatment was started) she continues to gain in weight, strength and energy. Her menses and libido have returned and her affect is warm and spontaneous; however, she still states her thinking is not as clear as it should be and during interview her associations remain loosely connected. She looks back on the whole episode as a period of confused thinking and emotions which now seems inexplicable to her since she denies any basis in reality for her former feelings regarding her husband. She also denies that she has ever previously had such feelings or ideas.

This case was felt to present an example of the importance of this syndrome being familiar to general practitioners and psychiatrists since the first impulse of the admitting physician had been to place this patient on Thorazine and refer her to the next psychiatric clinic. The use of a hypotensive agent plus delayed diagnosis and therapy might have proved fatal since her condition became critical even after correct treatment was started.

Discussion

In view of the apparent remarkable frequency of gross mental symptoms in Sheehan's syndrome, it seems clear that this is probably a true relationship and not necessarily a result of hypotensive or hypoglycemic crises. Whether it is related to hypothyroidism as Sheehan suspected is still not evident since this is such a common feature of the syndrome. Because of the possibility of erroneous psychiatric diagnosis resulting in institutionalization and E.S.T. or tranquilizer therapy as happened in this series, it would seem impor-

tant to bring this to the attention of general practitioners and psychiatrists. The use of E.S.T. or hypotensive tranquilizers in a patient who is barely compensating for a panhypopituitarism would seem fraught with danger. Since an increasing psychiatric picture frequently preceded the onset of acute hypotensive and hypoglycemic crises there is a real risk that these patients may be overlooked on a mental ward until it is too late for replacement therapy.

References

1. Sheehan, H. L.: The Syndrome of Hypopituitarism, Quart. J. Med., 18:319, 1949.
2. Selye, H.: Adaptive Reaction to Stress, Psychosom. Med., 12:149, 1950.
3. Lloyd, A. M.: Some Unusual Features of Post Partum Hypopituitarism, Med. J. Australia, 15:592, 1961.
4. Blau, J. N.: Lancet, 7121:408, 1960.

The Federal Government—Sole Employer?

There is more and more government interference in the conduct of one's private affairs; more and more tendency to want to rely on the government instead of doing it oneself; more and more whittling away at the private enterprise system; more and more feeling that business is irresponsible and the professional naive. The government's civilian payroll hit a record high of $14 billion in the last fiscal year, and the first month of the new fiscal year has shown an increase of 14,530 employees over the preceding month, for a total of two and a half million federal employees on the payroll. Thirty of the states have more federal employees than state employees. Maurice Stans, former Director of the Budget, has reported that every worker in the country will be employed by the Federal Government by the year 2058 if the growth rate of Federal Employment of the last 30 years continues into the future.—Austin Smith, M. D., President, Pharmaceutical Manufacturers Association, to National Association of Chain Drugstores, Oct. 25, 1962.

Dentistry Replies

• The author replies to a former article in the Journal on dental education.

NATHANIEL H. ROWE, D.D.S., M.S.D.*
St. Louis

DENTISTRY must speak out in righteous indignation against the criticism leveled at it by Charles C. Bass, M. D., as contained in the article "Personal Oral Hygiene, A Serious Deficiency in Dental Education," appearing in the October, 1962, issue of this Journal.[1]

The opening paragraph is simply not true. Since the beginning of time some people have had healthy dentitions to the day they died, despite the author's second sentence, "No one does," and this despite the lack of both dentistry and medicine as among primitive peoples. Just as the goal of medicine through the ages has been to promote good health and long life, the goal of dentistry has been to promote the well being and efficiency of the masticatory apparatus and para-oral structures until the end of life. Just as medicine has been partially successful in achieving its goal, so too has dentistry.

As longevity has been achieved, such problems as cancer and periodontal disease have come to the fore in the professions respectively. While neither the riddle of cancer nor the problem of periodontal disease has been solved, this is not to say that great strides in biologic understanding have not been achieved as a result of their investigation, because they have.

Caries

First let us deal with the problem of caries. Dr. Bass suggests, "microscopic study necessary." Since the turn of the century, dental education has dwelt extensively upon the histopathology of dental caries. But possibly to Dr. Bass's surprise, the study of caries, does neither begin nor end here! Biophysics, crystallography and colloid chemistry provide a background for interpretation of the histopathology observed. Instead of the binocular dissecting microscope which is "essential" according to Bass, electron microscopy, X-ray diffraction, and autoradiographic techniques have made their way into the studies of today's dental student. Instead of "dip the specimen in hydrochloric acid for half a minute" (not many patients hold hydrochloric acid in their mouths), experimental low-carbohydrate diet control, salivary lactobacillus counts, and topical fluoride applications provide better learning opportunities by allowing alteration of the already cariogenic environment of their patients' teeth rather than the simple acid decalcification of a tooth in vitro proposed by Dr. Bass. Extensive studies into the micro-biota indigenous to the oral cavity of man are part of every dental student's course work. This is a far cry from mere microscopic observation of the "bacterial film pad" suggested by Dr. Bass. Contemporary research such as caries experimentation in germ-free animals, transmissibility of dental caries in caries-susceptible rodents, and countless other aspects of the caries problem are rapidly incorporated into teaching methodology and just as quickly are replaced with newer information when it becomes available.

Far more important to the public is that today's dental graduate is familiar with methods for minimizing caries in the young, who will constitute tomorrow's dental public. Preventive public health measures such as fluoride addition to drinking water will reduce caries experience, in those receiving benefit of such addition, by approximately 60 per cent.[2-5] This has been demonstrated by public

* Division of Pathology, Washington University School of Dentistry, St. Louis, Missouri.

health authorities the world over and dental education can be justly proud of this altruistic achievement.

Oral hygiene, Dr. Bass to the contrary, is not the answer. *Fluoride addition to drinking water has been proven more effective and far cheaper than the best oral hygiene program.*

In an excellent study with school children of an isolated rural community in northern Minnesota, a combination of oral hygiene procedures was tested over a ten year period under the close supervision of the Minnesota Department of Health.[6] These children received a combination of the following:

1. Topical application of NaF.
2. Supervised toothbrushing twice per day (toothbrushes and dentifrice supplied).
3. Dental health education program for students and parents.
4. Efforts to control excessive intake of sweets.
5. Dental services available upon request.

Cost of this complete oral hygiene program averaged $30.82 per child per year. Fluoride addition to the communal water supply (amortizing the cost of fluoridation equipment over fifteen years) would have averaged only 54 cents per child per year. The extensive program in oral hygiene reduced dental caries 28 per cent, compared to the 60 per cent reduction anticipated if 1.2 parts per million fluoride had been added to the communal water supply instead. Incidentally, this small community has since installed fluoridation equipment.

Proper oral hygiene does have a definite place in the daily personal health regimen of everyone. It enhances the natural beauty of the teeth, helps prevent bad breath, and does reduce periodontal disease, also caries to some extent, but *absolutely does not "entirely prevent" either caries or periodontitis as stated by Dr. Bass* in the fourth paragraph of his article. Whereas the Minnesota study showed a caries reduction of only 28 per cent with optimum personal oral hygiene, consider India[7] where the vast majority of children never use a toothbrush and yet caries is very uncommon.

Oral Cancer

To convey the impression that dentists of today are trained to deal only with "tooth decay and pyorrhea" is at best a gross misconception.

Today's well-trained dentist is able to render health care far beyond repairing the ravages of caries and periodontal disease. Since most patients under the care of a family dentist are seen with regularity at least two times each year, the dentist is in the best position to detect and diagnose oral cancer. Over half the patients with oral cancer in the United States seek dental consultation and evaluation first, before being referred to a physician for therapy. The dental student is well oriented toward diseases of the oral soft tissues and bone. Biopsy procurement is performed by every dental student before graduation in the majority of the nation's dental schools. In the past twelve months nearly 400 biopsy specimens have been received for processing at this dental school alone. Twelve of these were malignant lesions.

Dental students today are acutely aware of the role they must assume in the recognition and diagnosis of malignant lesions of the oral cavity. In addition to detection, they are trained to render valuable service as part of the cancer therapy team. Extraction of teeth in fields to be irradiated, management of osteoradionecrosis, as well as prosthetic reconstruction and rehabilitation of surgical defects are but a few of the services the dentist is capable of performing.

Management of many patients brings the physician and dentist together today as never before. Problems of mutual concern include extraction of teeth in patients with a history of rheumatic endocarditis, arresting periodontal destruction in uncontrolled diabetes, facial cellulitis and thrombotic complications therefrom, to name only a few. Haymaker,[8] for example, has reviewed 28 fatal intracranial infections following tooth extractions.

Growth of Dentistry

Dentistry has undergone an amazing metamorphosis from a trade peddled in the back room to a modern health science in a remarkably short span of time. The profession is rapidly changing from a technically oriented discipline to one seeking basic information about etiology and pathogenesis of all oral diseases in order to combat causes rather than to alleviate symptoms. Now, and even to a greater extent in the years yet to come, the practice of good dentistry will be predicated upon a comprehensive understanding of oral disease.

References

1. Bass, C. C.: Personal Oral Hygiene; A Serious Deficiency in Dental Education, J. Louisiana State M. Soc., 111:370, Oct., 1962.

2. Report to the Minister of Health, Province of Ontario, on the Brantford fluoridation experiment. J. Canad. D.A., 22:342, 1956.

3. Ast, D. B., and Fitzgerald, B.: Effectiveness of Water Fluoridation. J.A.D.A., 65:581, 1962.

4. Arnold, Jr., F. A., Lipkins, R. C., Russell, A. L., and Scott, D. B.: Fifteenth year of the Grand Rapids Fluoridation Study. J.A.D.A., 65:780, 1962.

5. Dean, H. T.: Fluorine in the control of dental caries. J.A.D.A., 52:1, 1956.

6. Jordan, W. A., Snyder, J. R., Peterson, J. K., Johnson, R. A.: The Askov Dental Demonstration. A.D.A. Ten Year Study of a Community Dental Health Program, 1948-1958. Final Report. North West Dentistry, 38:445, 1959.

7. Day, C. D. M.: Nutritional Deficiencies and Dental Caries in Northern India. Brit. D. J., 76:115, 1944.

8. Haymaker, W.: Fatal Infections of the Central Nervous System and Meninges After Tooth Extraction, Am. J. Orthodont. & Oral Surg., 31:117, 1945.

Automobiles (and Now Rabbits) Have Replaced Horses

The effect of the economic motive can be detected in areas other than the obvious ones. Producing antipneumococcic serum from horses required many months and thus could not meet the demands of a changing market. Also this process was inefficient because the titer eventually achieved after many immunizations was not very high, and sometimes a horse would fail to produce serum of usable titer no matter how many times he had been immunized. Rabbits had been shown to produce antipneumococcic serums of high titer; they could be housed and handled more easily than horses; serum could be produced from them more quickly and thus the needs of the market could be followed more closely. Pharmaceutical manufacturers experimented with the production of commercial antipneumococcic serum from rabbits, found it feasible, and within a short time the production of antipneumococcic serum from horses was past history.—Harry F. Dowling, M. D. in **Archives of Internal Medicine,** Nov. 1962.

The Journal of the Louisiana State Medical Society

Established 1844

Published by The Journal of the Louisiana State Medical Society, Inc. under the jurisdiction of the following named Journal Committee:

George H. Hauser, M. D., Ex-Officio
J. E. Knighton, M. D., Chairman
Sam Hobson, M. D., Secretary
H. H. Hardy, Jr., M. D.
Edwin H. Lawson, M. D.*
M. D. Paine, Jr., M. D.

EDITORIAL STAFF

PHILIP H. JONES, M. D., Editor

COLLABORATORS—COUNCILORS

Nicholas J. Chetta, M. D.
J. E. Clayton, M. D.
Guy R. Jones, M. D.
C. E. Boyd, M. D.
Frederick A. Marx, M. D.
John L. Beven, M. D.
J. Y. Garber, M. D.
R. E. C. Miller, M. D.

C. GRENES COLE, M. D., General Manager
1430 Tulane Avenue

* Died May 30, 1963

Subscription Terms: $4.00 per year in advance, postage paid, for the United States; $5.00 per year for all foreign countries belonging to the Postal Union.

News material for publication should be received not later than the eighteenth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

Manuscripts should be addressed to the Editor, 1430 Tulane Ave., New Orleans, La.
The Journal does not hold itself responsible for statements made by any contributor.

Editorial

The Eighty-third Meeting of the Louisiana State Medical Society

The eighty-third annual meeting of the Louisiana State Medical Society and its House of Delegates was held May 6 to 8, 1963, in New Orleans. The sessions of the House of Delegates were well attended. The Scientific Sections showed an increased interest as compared to former years. The luncheons were the occasion of active interest on the part of the members and the social features were enjoyed as in the past. The House established policies and chose officers.

The meeting of the House of Delegates this year was marked by the new and desirable feature of reference committees. This innovation was recommended by the out-going President one year ago, Dr. C. J. Brown, and it was discussed at length by immediate Past President, Dr. Ralph Riggs, in his many visits to the local societies.

The institution of reference committees was established by unanimous vote at an early point in the sessions of the House of Delegates and served to expedite the work of the House in the manner anticipated. In this procedure new business, resolutions, and recommendations, from committees are referred to one of three reference committees appointed by the Speaker of the House for that purpose. These committees hear all interested parties including those from the House and also individuals of the State Society who are not members of the House. With information gathered freely in this manner and after due consideration the committees render reports at the next session of the House. This plan in no way restricts the authority of the House of Delegates. On the contrary it facilitates the work. The Delegates of the House have the benefits of physicians in and out of the House, the considered judgment of the committee and the satisfaction of knowing that a forum exists where the general membership

of the Society may express its views. This method is followed by our Congress, which is scarcely a recommendation, but it is also followed by the House of Delegates of the AMA and by the House of Delegates of our neighboring states. It is a change which is also a step of progress. The Society will have much benefit from its operation.

The House also took action on various matters of public policy. It went on record as favoring an effort on the part of organized medicine making pre-paid sickness insurance deductible for income tax purposes. The House concurred in a resolution that the Louisiana State Medical Society should join with other state societies in an effort to influence the Joint Commission on the Accreditation of Hospitals. The AMA members of the Commission would be requested to propose that it should change its present standards to make the requirements less unreasonable and the production of records less a burden on the profession.

The House of Delegates directed that resolutions should be presented to the House of Delegates of the American Medical Association requesting that the document "Lifetime Learning for Physicians" as a guide for national program of continuing education be reconsidered by the appropriate committee. The feeling was that the operation of this plan would interfere with many local and varied programs continuing of education for physicians already established and now esteemed by the profession.

The House approved a resolution from Calcasieu Parish the effect of which is to call attention to all who are concerned with the spiraling costs of hospital care to the fact that the major portion of this care is not professional cost but is related strictly to problems of hospital administration and calls on all concerned to recognize that the real solution of the problem lies with the writing of better and more realistic health insurance policies.

The House took the position that the practice of referring laboratory work and other diagnostic tests to commercial laboratories, not supervised by physicians, was unethical and that such practice was subject to disciplinary action of the Society.

The House decided that representation should be made to the proper authorities in the American Medical Association to the effect that the House of Delegates of the Louisiana State Medical Society disapproves of the action of the California School of Medicine granting M. D. degrees to 2400 graduates in the past thirty years when the school was the Los Angeles School of Osteopathy.

The officers of the coming year were chosen at this meeting. The evidence of the collective sagacity exhibited in the selection should bring security and comfort to the minds of the membership.

Dr. George Hauser of New Orleans became President. He undertakes the direction of the affairs of our society with full knowledge and long experience in its operations. He has served well in many capacities and committees in both the Orleans Parish and the Louisiana State Medical Societies. He has the respect and confidence of his confreres. The Society will profit by his leadership.

The President-Elect for the coming year is Dr. Henson S. Coon, a surgeon of Monroe. Dr. Coon graduated from Tulane in 1929. He has practiced since internship in Monroe. He has served many years in the House of Delegates of the State Society and has merited the confidence of his fellow physicians in many offices and on many committees of the local, district and state societies. He was four years in the Army in the South Pacific. His experience and identification with the best in organized medicine assures the Society of a successful period of guidance under his direction.

Dr. J. O. Weilbaecher, Jr. who was elected First Vice-President has been on the Executive Committee in other capacities. He is a part-time teacher at LSU, maintains an active practice as an internist and has held numerous positions of confidence in the Orleans Parish Medical Society as well as the State Society. He

has been a member of the Board of Administrators of Charity Hospital. His mature judgment and breadth of view continue to keep him a valuable member of the Executive Committee.

The Second Vice-President is Dr. Eugene G. Durel of New Roads. Dr. Durel has been active in local and district societies and has been a faithful worker in the House of Delegates for some years. His energy, prudence and courage will be helpful in the Executive Committee.

Dr. Maurice St. Martin, who was chosen Third Vice-President, was Chairman of Arrangements for our recent and highly successful meeting in New Orleans. He deserves the plaudits of all. Dr. St. Martin has worked effectively in the affairs of the Orleans Parish Medical Society and in the New Orleans Graduate Medical Assembly. His steady judgment and dedication to the cause of medicine will be constructive in our councils.

The Councilor for the Fifth District is Dr. Fred Marx of Monroe. He has served extensively in the House of Delegates, is Past President of his local and district Societies. He continues to apply himself in the interests of both. The Council and the Executive Committee will benefit by his consistent and forceful help.

Dr. Ralph Riggs, Immediate Past President was elected as Delegate to the House of Delegates of the American Medical Association for 1964 and 1965. He returns to this position after a former term there as an Alternate and Delegate and after a year as President of our State Society in which his efforts on behalf of the profession were energetic and exemplary. Among other achievements was his visiting more local societies than other Presidents of record.

The makeup of the Executive Committee and the Council in other respects remains the same. The membership can congratulate itself on the character and experience of the officers chosen.

ORGANIZATION SECTION

The Executive Committee dedicates this section to the members of the Louisiana State Medical Society, feeling that a proper discussion of salient issues will contribute to the understanding and fortification of our Society.

An informed profession should be a wise one.

ABSTRACTED MINUTES
HOUSE OF DELEGATES
May, 1963

Minutes

Minutes of 1962 meeting of *House of Delegates*, approved as recorded.

Minutes of *Executive Committee* since 1962 meeting of House of Delegates, approved as recorded.

Special Order

Roll of deceased members read.

Talk by Dr. Norman A. Welch, *Speaker, House of Delegates of AMA.*

Talk by Dr. M. Vaun Adams, *President, Alabama Medical Society* in re *AMPAC.*

Talk by Mr. Ashton Phelps in re *suit against the Louisiana State Board of Medical Examiners.*

Talk by Mr. Robert E. LeCorgne, Jr. in re *suit against the Louisiana State Board of Medical Examiners.*

Messages sent to Drs. Val H. Fuchs, C. M. Horton and Edwin H. Lawson, *past presidents* who were *unable to attend the meeting due to illness.*

Greetings from Mississippi State Medical Association by Dr. Victor E. Landry, *Fraternal Delegate.*

Greetings and report from representatives of the *Woman's Auxiliary* of the AMA, SMA and LSMS.

Announcement of *Scientific Exhibit Awards:* First Place—Dr. Homer D. Kirgis, et al; Second Place—Owens Clinic.

Communication

Greetings from the Louisiana Dental Association.

Reports without Recommendations

Following *reports accepted as printed:* Secretary-Treasurer, Chairman of Council, *Councilors:* First, Second, Third, Fourth, Fifth, Sixth, Seventh, Eighth Districts; *Committees:* Accredita-

tion of Hospitals, Aid to Indigent Members, Alcoholism, Arrangements—1963 Annual Meeting, Assistance to Medical Students, Blood Banks, Budget and Finance, Chronic Diseases, Committees, Congressional Matters, Department of Public Welfare (Advisory Committee), Diabetes, Domicile, Gamma Globulin and Salk Vaccine, Geriatrics, Gulf Coast Meetings, Historian, Hospitals, Industrial Health, Insurance, Lectures for Colored Physicians, Liaison with Louisiana Hospital and Nurses Associations, Liaison with Louisiana State Nurses Association, Liaison with Medical Schools, Louisiana Organizations for State Legislation, Mediation, Medical and Hospital Service in re Insurance Contracts, Medical Defense, Medical Education, Medical Testimony, Mental Health, National Emergency Medical Service, Neuropsychiatric Service at Charity Hospitals, Public Health of the State of Louisiana, Revision of Charter, Constitution and By-Laws, Rural and Urban Health, Scientific Work, State Hospital Policies and Medical Indigency, Tetanus Protection, Woman's Auxiliary.

Other reports containing no recommendations: Legislative Consultant (Mr. Landry thanked for services); Louisiana State Board of Medical Examiners (message sent to Dr. Lawson); AMA delegates.

Reports with Recommendations

President: Report referred to Committee on President's Report and report of this Committee, including endorsement of recommendations made by the President, adopted: 1. The State Society actively support the continuing efforts to improve the Kerr-Mills Law: Heartily endorse. 2. Every Society member vigorously oppose all socialistic types of legislation, such as the King-Anderson Bill: Fully in agreement with opposition of all King-Anderson type legislation and urge all members to ecoperate in the project "OPERATION HOMETOWN". 3. Every member of the Society actively support AMPAC and LAMPAC in continuing their political efforts: Firmly believe King-Anderson type legislation can best be combatted by active participation of all members of the Society in AMPAC and LAMPAC. 4. The Liaison Committee between the State Medical Society and our two medical schools be continued: This Liaison Committee is the method for portraying our views to the medical students, as shown by past experience. 5. A Quackery Conference, sponsored by this Society, be held some time before the meeting of the 1964 Louisiana Legislature: Urge Quackery Conference, sponsored by State Society, be held at earliest possible time in order to combat the very dangerous situation which is facing the citizens of the State at this time. 6. Every member of this Society actively participate in AMA-ERF in helping to finance the education of our future physicians: Recommend very strongly that all members participate in AMA-ERF and would mention that memorials can be made through the Woman's Auxiliary.

Past Presidents Advisory Council: 1. No action taken concerning resolution with regard to accreditation of hospitals. 2. Reference Committees—approve in principle appointment of reference committees and urge their serious consideration by the House of Delegates and their adoption. 3. History of Medicine in Louisiana and Trust Fund given by Dr. Matas—Attorneys for Louisiana State Medical Society and special committee handling fund meet and bring about joint recommendation for further definite consideration. This report was accepted by the House of Delegates. The recommendation concerning the History of Medicine in Louisiana was referred to Reference Committee A and recommendation of Committee to approve was adopted.

Committee on AMA-ERF: 1. This Committee be continued and receive the active support of the Society: Recommendation of Reference Committee C that recommendation be accepted—adopted. 2. The House of Delegates consider recommending an increase in dues of $10.00 per year for each member and this $10.00 be allocated to AMA-ERF: Referred to Committee on Budget and Finance and recommendation of this Committee to approve, permitting each physician to designate the university to which this $10.00 shall be given — tabled. 3. AMA - ERF be publicized more thoroughly, not only to the medical profession but also to the general public: Recommendation of Reference Committee C that recommendation be accepted — adopted. 4. Since people whose loved ones have passed away frequently request that money be sent to various organizations in lieu of flowers, an endeavor be made to have them donate some of such money to AMA-ERF instead of only to Cancer Society, Heart Fund, etc.: Recommendation of Reference Committee C that recommendation be deleted—adopted. 5. Doctors make donations to AMA-ERF in remembrance of other doctors who have rendered service to members of their family; instead of sending the usual token gift to the doctors, send a note to the doctor and the money to AMA-ERF in his behalf: Recommendation of Reference Committee C that recommendation be deleted—adopted. 6. Get the drug stores which send individual gifts to doctors at Christmas and on birthdays, to make donations to AMA-ERF in lieu of such gifts, and send a card or letter to the doctor or the Medical Society indicating that such a donation has been made: Recommendation of Reference Committee C that recommendation be deleted—adopted. 7. Suggest that the AMA get the banks to reduce the rate of interest on loans from 5½% to at least 4%. Recommendation of Reference Committee C to accept, discussed and motion to delete, carried.

Cancer Commission: 1. (Revised as follows by Reference Committee C) More widespread employment of mammography as an aid in the early detection of breast cancer: Recommendation of Reference Committee to accept, as revised—adopted. 2. Even more widespread and frequent employment of facilities now available for early detection of cancer of the uterus: Recommendation of Reference Committee C that recommendation be accepted—adopted. 3. Continuation of intensive professional and lay educational programs: Recommendation of Reference Committee C that recommendation be accepted—adopted. 4. Amount of five hundred dollars ($500.00) be budgeted for use, if necessary, by the Cancer Commission for carrying out its various functions during the coming year: Referred to Committee on Budget and Finance and report of that Committee that the amount has previously been budgeted and approved by the Executive Committee—accepted.

Committee on Department of Public Welfare (Advisory Committee): (Supplemental Report) 1. (Revised as follows by Reference Committee C). Committee be continued: Recommendation of Reference Committee to accept, as revised—adopted. 2. Members of the profession of the State of Louisiana give support to the implementation of the Kerr-Mills Law as now in operation in Louisiana: Recommendation of Reference Committee C to accept—adopted. Recommendations, as follows, contained in oral report—adopted. 1. Approval of statement on claim form to be signed by physicians rendering medical service to welfare patients. 2. Continuation of Committee and cooperation of House of Delegates and members of State Society and continuance of Kerr-Mills Law as presently implemented.

Committee on Establishment of Hall of Fame of Medicine in Louisiana: 1. A Committee on Establishment of Hall of Fame of Medicine in Louisiana be continued: Recommendation of Reference Committee C to accept—adopted.

Committee on Federal Medical Services: 1. Continue support of and strengthen the Kerr-Mills Law. 2. Endorse AMA 8-point program to help the nation's older citizens. 3. Oppose vigorously King-Anderson type legislation. 4. Reassert the policy that medical care responsibility of the Veterans Administration be limited to service-connected illnesses and injuries. 5. A copy of the AMA pamphlet "Medical Care for the Needy; A Guide to Policy Statements adopted by the House of Delegates", be sent to all members of the Society as an enclosure with CAPSULES: Recommendation of Reference Committee B that all recommendations be endorsed—adopted.

Committee on Journal: 1. Dr. H. H. Hardy, Jr., of Alexandria, be elected a member of this Committee: Referred to Nominating Committee and recommendation of that Committee for election—adopted.

Committee on Liaison with Louisiana State Bar Association: 1. (Revised as follows by Reference Committee A) Committee be continued: Recommendation of Reference Committee to accept, as revised—adopted.

Committee on Maternal Welfare: 1. Appropriation of $250.00, approved by the Committee on Budget and Finance in 1962, be made available: Recommendation of Committee on Budget and Finance that amount be appropriated—adopted.

Committee on Public Policy and Legislation: 1. Continuation of the first aid station at the Capitol building during legislative sessions. 2. Continued maintenance of the effective integrity of the Louisiana State Medical Practice Act. 3. The Louisiana State Medical Society request that its legal counsel attempt to obtain permission from the appropriate court for the Society to publicly explain its position regarding the status of chiropractic in Louisiana. 4. Continued utilization of the services of Mr. Percy J. Landry, Jr., as Legislative Consultant. Recommendation of Reference Committee B to approve these four recommendations—adopted. 5. (supplemental report) Recommendation in re change in license plates: Recommendation of Reference Committee B that no change be made at this time—adopted. 6. (supplemental report) Recommendation in re incorporation of medical practice: Recommendation of Reference Committee B that no legislation be introduced at this time—adopted.

Committee on Reference Committees: 1. The By-Laws of the State Society be amended at the opening session of the House of Delegates at the Annual Meeting, by addition of a second paragraph to Section 4 of Chapter IV, as follows: "The Chairman should appoint reference committees from the membership of the House of Delegates, which committees shall expedite the business of the House in its annual or special sessions." Adopted and three committees appointed. 2. Time and place of meetings of reference committees be left to the direction of the House of Delegates but unless otherwise specified they may meet simultaneously with the proceedings of the House or separately, according to the plans that may be made for the session — adopted. 3. Matters referred to the reference committees are those recommendations of standing and special committees, new business, resolutions presented to the House and other such matters as the House may direct—adopted.

Committee on Resolutions: 1. A copy of these resolutions be sent to each person and organization mentioned and also published in The Journal of the Louisiana State Medical Society—adopted.

Committee on State Government Health Services: 1. Continuation of Committee: Recommendation of Reference Committee B to approve—adopted. 2. (Supplemental report) (Revised as

follows by Reference Committee B) Add four members to the Committee; two from Sixth District: Recommendation of Reference Committee to accept, as revised—adopted. 3. (Supplemental report) (Revised as follows by Committee on Budget and Finance) $1,000.00 be budgeted as an initial allocation for expenses of the Committee: Recommendation of Committee on Budget and Finance to approve, as revised — adopted. 4. (Supplemental report) Members of the Society speak to candidates concerning governmental health services: Recommendation of Reference Committee B to drop recommendation—adopted. 5. (Supplemental report) (Revised as follows by Reference Committee B) The Executive Committee be reminded of its power to furnish the names of tentative candidates for an advisory committee to the Louisiana Hospital Board: Recommendation of Reference Committee to approve, as revised—adopted. 6. (Supplemental report) (Revised as follows by Reference Committee B) Louisiana State Medical Society write to PAR expressing recognition of their undertaking in the investigation and evaluation of governmental health services; also express appreciation of their evaluation of the Kerr-Mills program: Recommendation of Reference Committee to approve, as revised—adopted.

Council on Medical Service and Public Relations: 1. Continue all efforts to combat King-Anderson type legislation and lend full assistance to the "Operation Hometown" program. 2. Lend full support to efforts to educate the public and physicians on the Kerr-Mills Law. 3. Complete arrangements for the Society's conference on quackery and cultism to be held prior to the next regular session of the Legislature. Recommendation of Reference Committee A to approve these three recommendations—adopted. 4. (Revised as follows by Reference Committee A) If suitable new exhibits can be obtained, place health exhibits for laymen at parish fairs or festivals: Recommendation of Reference Committee to approve, as revised—adopted. 5. Continue to provide information and materials on medical and health careers to high school seniors. 6. The Society's safety program be continued in connection with the major holidays. Recommendation of Reference Committee A to approve these two recommendations—adopted.

Resolutions *

Orleans Parish Medical Society in re opposition of State of Louisiana et al setting up *medical units* to treat employees: Recommendation of Reference Committee A that resolution be approved—adopted.

Orleans Parish Medical Society in re *rights of injured employees to choose own physician:* Recommendation of Reference Committee A to approve, as revised—adopted.

Caleasieu Parish Medical Society in re *Health Insurance:* Recommendation of Reference Committee B to approve—adopted.

Caleasieu Parish Medical Society in re *Government Employment Services:* Recommendation of Reference Committee B to endorse—adopted.

Orleans Parish Medical Society in re participation and support of *laboratories not properly supervised by licensed physician:* Recommendation of Reference Committee B to approve—adopted.

Sixth District Medical Society in re *income tax deduction for health insurance:* Recommendation of Reference Committee B to approve—adopted.

Ouachita Parish Medical Society in re *Kerr-Mills Law:* Withdrawn inasmuch as the objectionable clause to which it referred has been deleted.

Lafourche Parish Medical Society in re *Kerr-Mills Law:* Recommendation of Reference Committee C to delete two "resolves"—adopted.

Orleans Parish Medical Society in re *Statement of Policy of Joint Commission on Accreditation of Hospitals:* Recommendation of Reference Committee C to refer to Committee on Accreditation of Hospitals—adopted.

Orleans Parish Medical Society in re *Clark-Neuberger Bill* (S. 533) *(Vivisection):* Recommendation of Reference Committee C to accept—adopted.

Orleans Parish Medical Society in re *Action of AMA House of Delegates concerning document "Lifetime Learning for Physicians":* Revised by Reference Committee C and recommendation of Reference Committee to accept, as revised — adopted.

Orleans Parish Medical Society in re *Osteopathic Schools:* Additional "resolve" submitted by Reference Committee C and recommendation of Reference Committee to accept, with addition—adopted.

Dr. Rufus Craig in re *screening examinations at Crippled Children's Clinics*—Referred to Committee on State Government Health Services.

Amendment

Addition to *Section 4 of Chapter IV of By-Laws,* as follows: "The Chairman should appoint reference committees from the membership of the House of Delegates, which committees shall expedite the business of the House in its annual or special sessions."

Other Action

Recommendation of Executive Committee that *report of Committee on Reference Committees* be accepted and committees formed at this meeting of the House of Delegates—adopted.

Revision of Operational Survival Plan omitting "Background and Explanatory" in its entirety; designation of Deputy Director by the President

* Copies of resolutions are on file in the office of the Secretary-Treasurer and may be reviewed by any member wishing to see them.

of LSMS upon recommendation of its Executive Committee rather than by the Executive Committee directly; appointment of Area Directors and Alternates by the President of the Society instead of appointment upon recommendation of the Deputy Director; and substitution of the word "Director(s)" for "Chairman(Chairmen)".

Recommendation of Reference Committee C that copy of *"Reports and Abstracted Minutes"* be sent to all members of the Society prior to Annual Meeting—adopted (all data to be included in booklet to reach Society office at least six weeks prior to date of Annual Meeting).

Approval of motion to contact each parish society by letter and in CAPSULES encouraging them to form *Tetanus Protection Committees.*

House of Delegates on record as approving work done by *Advisory Committee to the Department of Public Welfare* and Committee authorized to continue its activities in the future.

Matters Discussed—No Action Taken

Importance of affiliation with *LAMPAC.*

Suggestion that presidents of senior classes at Tulane and LSU Medical Schools be invited to *meetings of House of Delegates*—impossible due to executive type meetings.

Education of new members in re matters of importance to doctors.

Discussion of *activities of Committee on Liaison with Medical Schools.*

Election of Officers, Delegates and Alternates to AMA and Committees

President-elect—Dr. Henson S. Coon, Monroe

First Vice-President—Dr. J. O. Weilbaecher, Jr., New Orleans

Second Vice-President—Dr. Eugene G. Durel, New Roads

Third Vice-President—Dr. M. E. St. Martin, New Orleans

Chairman, House of Delegates—Dr. Charles B. Odom, New Orleans

Vice-Chairman, House of Delegates—Dr. H. H. Hardy, Jr., Alexandria

Councilor, Third District—Dr. Guy R. Jones, Lockport

Councilor, Fifth District — Dr. Frederick A. Marx, Monroe

Councilor, Sixth District—Dr. John L. Beven, Baton Rouge

Councilor, Seventh District—Dr. J. Y. Garber, Lake Charles

Councilor, Eighth District—Dr. R. E. C. Miller, Alexandria

Delegate to AMA—1964 and 1965—Dr. Ralph H. Riggs, Shreveport

Alternate Delegate to AMA — 1964 and 1965 — Dr. Rhett McMahon, Baton Rouge

Committee on Committees: Dr. J. Kelly Stone, New Orleans, Chairman; Dr. Rhett McMahon, Baton Rouge and Dr. H. Ashton Thomas, New Orleans.

Committee on Journal: Dr. H. H. Hardy, Jr., Alexandria.

Committee on Medical Defense: Dr. C. B. Ericksen, Shreveport, Chairman.

Committee on Public Policy and Legislation: Dr. Joseph A. Sabatier, Jr., Baton Rouge, Chairman; Dr. N. J. Chetta, New Orleans; Dr. J. E. Clayton, Norco; Dr. I. W. Gajan, Jr., New Iberia; Dr. C. E. Boyd, Shreveport; Dr. E. J. Brown, Monroe; Dr. Jack Thielen, Lake Charles; Dr. F. P. Bordelon, Jr., Marksville.

Committee on Scientific Work: Dr. C. Grenes Cole, New Orleans, Chairman; Dr. Sam Hobson, New Orleans and Dr. S. L. Gill, Shreveport.

Future Annual Meetings

1964—Lafayette, May 4-6.

1965—New Orleans, May 3-5.

1966—Alexandria.

REFERENCE COMMITTEES

Reference Committees were approved and used for the first time by our Society during the Eighty-Third Annual Meeting held on May 6-8. The Chairmen and personnel of three reference committees, A, B and C were appointed by the Speaker of the House. All reports with recommendations, resolutions and other measures which were presented to the House of Delegates were referred to these respective reference committees for hearings. Final reports and recommendations were referred to the second meeting of the House of Delegates for final action by this governing body.

These committee sessions were well attended, and free discussions of the issues at hand were presented by House members as well as by other members of the Society.

All interested members of the Society are eligible to speak and discuss any and all matters referred to these committees and free and full discussions are welcome.

Only members of the House of Delegates are eligible for appointment on Reference Committees.

The personnel of the Reference Committees serving for the annual session just closed were:

Reference Committee A

Dr. C. J. Brown, Chairman
Dr. F. J. Macpherson
Dr. N. J. Chetta
Dr. J. Y. Garber
Dr. W. Robyn Hardy

Reference Committee B

Dr. Joseph A. Sabatier, Jr., Chairman
Dr. A. V. Friedrichs
Dr. Joseph J. Massony
Dr. Walter Moss
Dr. J. L. Beven

Reference Committee C

Dr. H. Ashton Thomas, Chairman
Dr. F. J. Jones

Dr. H. H. Hardy, Jr.
Dr. Ambrose Storck
Dr. John Tanner

It is hoped that the members will continue to show interest in this new procedure of handling these most important matters which are presented for consideration and final action by our House of Delegates.

REPORT OF COMMITTEE ON MEDICAL DEFENSE

In the twelve-month period, March 1, 1962 to March 1, 1963 this Committee has received five requests for legal assistance in claims of malpractice.

Case I.

Suit for $39,575.00 against a doctor and his insurer alleging malpractice arising from operation on injured hand involving tendons. Defense approved by Committee in August, 1962.

Case II.

Suit for approximately $62,000.00 alleging malpractice following a miscarriage. Defense approved September, 1962.

Case III.

Claims aggregating $62,425.62 claiming negligence in the death of a patient from tetanus. Defense authorized in December, 1962.

Case IV.

Claim in amount of $63,046.80 against a doctor alleging negligence after dilatation and curettage necessitating further surgery, anguish, pain and expense. Defense approved by Committee in January, 1963.

Case V.

Case in which a member of the Society is joint defendant in action against Louisiana State University Medical School and Charity Hospital in New Orleans. Defense authorized in February, 1963.

No further action has been reported in the above cases.

One case instituted in 1960 has been dismissed on motion of the claimant and in the opinion of our attorney this will be final. A case submitted in 1958 was dismissed by the Court on grounds of excessive delay on the part of the plaintiff's attorney.

No other matters came to the attention of your Committee during this period.

C. B. ERICKSON, M. D., Chairman

REPORT OF COMMITTEE ON RESOLUTIONS

As the 1963 Annual Meeting draws to a close the Committee on Resolutions is very well aware of the fact that the success of this meeting has been due to the combined efforts of many individuals and groups and therefore, wishes to express sincere thanks to the following who have rendered service to this organization.

Dr. John J. Archinard, President; Dr. Maurice E. St. Martin, Chairman of the Committee on Arrangements, all personnel of the various local committees as well as the entire membership of the Orleans Parish Medical Society, hosts to the meeting.

Dr. Norman A. Welch, Speaker of the House of Delegates of the American Medical Association, for his most interesting and enlightening talks before the House of Delegates and at the Public Meeting on Monday evening.

Reverend Ray D. Fortna who offered the invocation at the official opening meeting of the Annual Meeting.

Honorable James E. Fitzmorris, Councilman-at-Large of the City of New Orleans, for his cordial welcome to the City and for the honorary citizenship bestowed upon Dr. Welch.

The chairmen of the various scientific sessions for a most interesting program and the following out-of-state guests who participated in this program.

Dr. Roger C. Baker, Washington, D. C.
Dr. Clifford J. Barborka, Chicago, Illinois
Dr. Carleton B. Chapman, Dallas, Texas
Dr. James D. Hardy, Jackson, Mississippi
Dr. Morris A. Kaplan, Chicago, Illinois
Dr. Harold O. Peterson, Minneapolis, Minnesota
Dr. Harry C. Shirkey, Birmingham, Alabama
Dr. Perry P. Volpitto, Augusta, Georgia
Dr. Watts R. Webb, Jackson, Mississippi

Honorable Walter B. Hamlin, Honorable Robert A. Ainsworth, Jr., Mr. Ford Reese and members of the medical profession who participated in the Medicolegal Conference.

The New Orleans papers as well as the press throughout the State for publicity prior to and during the time of the meeting.

Radio and TV stations in New Orleans and throughout the State for excellent cooperation in broadcasting many phases of the meeting.

Mr. Al Bourgeois, Convention Manager of the Hotel Roosevelt for his splendid cooperation in handling facilities for various sessions and functions in connection with the meeting and also for the excellent services rendered members of the Society by the hotel personnel. It is particularly desired that thanks be expressed to Mr. Richard Toole, Assistant Manager of the Hotel for his assistance in contacting Mrs. C. Grenes Cole at the time Dr. Cole became ill.

Thanks are also expressed to other hotels and motels in the New Orleans area which furnished accommodations for those in attendance at the meeting.

The Catholic Physicians Guild of New Orleans for the Mass held in memory of members of the Society who died during the past year.

Mr. Percy J. Landry, Jr., Legislative Consult-

ant, for his report to the House of Delegates and his expression of continued cooperation in connection with future legislation of interest to the medical profession.

Scientific Exhibitors for the instructive exhibits displayed.

Members of the medical profession for their generosity in displaying art work.

Pharmaceutical, surgical and other companies and organizations for technical exhibits.

The Metairie Country Club for facilities for the Golf Tournament.

Dr. Morgan Lyons for presentation of the report of the Louisiana State Board of Medical Examiners to the House of Delegates in the absence of the Secretary, Dr. Edwin H. Lawson.

Officers and members of the Woman's Auxiliary for the excellent program and activities planned for members of the Auxiliary.

Dr. Ralph H. Riggs, who has rendered valuable service as President of the Society during the past year.

The Past Presidents Advisory Council for continued interest in all matters concerning the medical profession and for their report to the House of Delegates.

Dr. Charles B. Odom, Chairman of the House of Delegates for his efficient handling of business presented to the House.

Dr. C. Grenes Cole, Secretary-Treasurer who, even when taken ill, maintained his interest and loyalty in connection with this meeting and who has served the organization in such an altruistic manner for so many years.

Mr. J. Paul Perret, Executive Assistant to the Secretary-Treasurer, for his assistance and particularly for the service rendered in connection with publicity incident to the meeting.

Miss Annie Mae Shoemaker, Assistant Secretary-Treasurer and the entire secretarial staff for their efficient handling of details prior to and during the time of the meeting.

Messages have been sent to Drs. C. M. Horton, Val H. Fuchs and Edwin H. Lawson, Past Presidents who were unable to attend the meeting due to illness, expressing to them how much they have been missed and wishing for them a speedy recovery.

Recommendation

It is recommended that a copy of these resolutions be sent to each person and organization mentioned and also published in The Journal of the Louisiana State Medical Society.

E. G. Durel, M. D., Member
JOHN P. BURTON, M. D., Member
SAM HOBSON, M. D., Chairman

MEDICAL NEWS SECTION

CALENDAR

PARISH AND DISTRICT MEDICAL SOCIETY MEETINGS

Society	Date	Place
Ascension	Third Tuesday of every month	
Calcasieu	Fourth Tuesday of every other month	Lake Charles
East Baton Rouge	Second Tuesday of every month	Baton Rouge
Jefferson	Third Thursday of every month	
Lafayette	Second Tuesday of every month	Lafayette
Lafourche	Last Tuesday of every other month	
Morehouse	Third Tuesday of every month	Bastrop
Natchitoches	Second Tuesday of every month	
Orleans	Second Monday of every month	New Orleans
Ouachita	First Thursday of every month	Monroe
Rapides	First Monday of every month	Alexandria
Sabine	First Wednesday of every month	
Tangipahoa	Second and fourth Thursdays of every month	Independence
Second District	Third Thursday of every month	
Shreveport	First Tuesday of every month	Shreveport
Vernon	First Thursday of every month	

ALFRED A. RICHMAN FELLOWSHIP FOR CHEST DISEASE

The Alfred A. Richman Fellowship for Chest Disease has been established by the Council on International Affairs of the American College of Chest Physicians.

This fellowship, through a generaus grant from Dr. Richman of New York City and his associates, will make it possible for deserving physicians to pursue postgraduate study in an approved institution of their choice for a period of one year.

The fellowship provides for a grant of $100 per month for a period of 12 months.

The selection of candidates will be under the supervision of the Council on International Affairs of the College. For complete information, applicants are requested to write to the Council

c/o American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

Dr. Richman has been active for a number of years in furthering postgraduate medical education in chest disease, while serving as the Chairman of the Committee on Resident Fellowship of the College.

LOUISIANA STATE BOARD OF MEDICAL EXAMINERS

The Louisiana State Board of Medical Examiners will hold its next examination in medicine and surgery on June 13, 14 and 15, 1963. Applications must be filed at 521 Hibernia Bank Building, New Orleans, by May 24. Applicants must be present at the examination room, third floor, Louisiana State University School of Medicine, 1542 Tulane Avenue, New Orleans, on Thursday, June 13, at 8:00 a.m.

For information, telephone 524-6763 or write Dr. Edwin H. Lawson, Secretary-Treasurer.

57th ANNUAL MEETING SOUTHERN MEDICAL ASSOCIATION

The 57th Annual Meeting of the Southern Medical Association will be held November 18-21, 1963, at New Orleans, Louisiana.

The EENT Section will initiate the closed T.V. sessions this year with the first attempted color production of microscopic ear surgery on Monday morning, November 18th, in the Municipal Auditorium's viewing room at New Orleans.

The "Louisiana Day" session of the EENT afternoon program will follow, after a reasonable interval, Dr. Edward Annis' presentation at the President's Luncheon.

The Eye Program will include a practical review on the pathogenesis and technical management of fibrous dysplasia and timely articles concerning air rifle injuries and other traumatic injuries to the eye.

Physicians desiring to present papers at this session are urged to correspond with the Section Secretary at their earliest convenience as the cut-off date is June 30, 1963.

CLINICAL CENTER STUDY OF CHRONIC MYELOGENOUS LEUKEMIA

The cooperation of physicians is requested in a study of chronic myelogenous leukemia being conducted by the Chemotherapy Service of the National Cancer Institute at the Clinical Center, National Institutes of Health, Bethesda, Maryland.

Referrals of patients with chronic myelogenous leukemia are needed. Particularly needed are those in the 20 to 40 year group with high white blood cell counts and platelet counts, for studies of newer chemotherapeutic agents and as a source of white cells and platelets for *in vitro* and *in vivo* study.

Physicians who wish to have their patients considered for the study may write or telephone: Dr. Paul P. Carbone, Chemotherapy Service, Medicine Branch, National Cancer Institute, Bethesda 14, Maryland, Telephone: 496-4251.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

Applications for certification in the American Board of Obstetrics and Gynecology, letters requesting reopening of applications, and requests for re-examination are now being accepted in the office of the Executive Secretary. All applications and letters of request must be submitted by **July 1, 1963,** and accompanied by **current** duplicate lists of patient dismissals for the preceding twelve months.

Candidates are urged to carefully review the current Bulletin of the Board which may be obtained by writing to the office of the Executive Secretary. Particular attention should be given to the existing requirements of the Board before application is made.

Diplomates are urged to keep the Board office informed of their current address.

AMA HOSPITALITY FOR WOMEN PHYSICIANS

All women physicians attending the AMA in Atlantic City are invited to rest in the Hospitality Room #2 on the Mezzanine Floor in the Convention Hall.

On June 18 from 4 to 6 p.m. The American Medical Women's Association is serving tea in the Hospitality Room. All women physicians and their friends are invited.

LOCAL PATHOLOGISTS NAMED DIPLOMATES BY AMERICAN BOARD OF PATHOLOGY

Drs. Robert L. Flinner, Tulane University School of Medicine, and Jack M. Stephenson, USPHS Hospital, have been named Diplomates of the American Board of Pathology.

This certification is given after a pathologist has met the highest standards of the medical specialty of pathology, with a minimum of 4 years of training and experience after getting his M. D. degree.

Pathology is the practice of laboratory medicine. Pathologists specialize in detecting and identifying causes of disease and death through analysis of body fluids, cells, tissues and organs.

Certification is given in seven classifications of pathology. The principal classifications are anatomic pathology and clinical pathology. The others are the special fields of forensic pathology, neuropathology, hematology, clinical chemistry, and clinical microbiology. Many pathologists ultimately attain certification in two or three classifications.

BOOK REVIEWS

Clinical Biochemistry; by Abraham Cantarow and Max Trumper, 6th ed., Saunders, 1962, 776 pages, $13.00.

This book continues to be of extreme value to the physician in understanding the metabolic aspects of normal and pathological reactions. It provides insight into the mechanisms and intricacies of chemical diagnostic procedures. Its usefulness is enhanced by the facility with which it can be read and understood. It is well organized and has a serviceable index and adequate references.

In comparison to the fifth edition, the section on glycogen storage diseases has been reorganized and the one on digestion and absorption has been expanded.

There is an added section on erythrocyte enzyme defects and on myoglobinurias pointing to the rapidity with which the authors have kept up to date. There is a new chapter also on enzymes and on intestinal malabsorption syndromes.

The chapter on biochemical aspect of diets has been eliminated, and the chapter on vitamins does not parallel the rest of the book in excellence. There is no mention of the Figlu test and the I^{131} triolein and oleic acid tests are still advocated.

This book should be of great value to all physicians who derive satisfaction from understanding the mechanism of diseases and it may aid in their management of them.

CARLOS LAMAR, JR., M. D.

Synopsis of Roentgen Signs; by Isadore Meschan and R. M. F. Farrer-Meschan, W. B. Saunders Co., 1962. 436 p. $11.00.

The book is a systematic approach to roentgen diagnosis and is a synopsis of the authors' previous book, "Roentgen Signs in Clinical Diagnosis" brought up to date with excellent study aids such as the midget exhibit, in that each page is set up as an exhibit. One of the outstanding characteristics of this book is that specific radiographic findings are listed with differential diagnoses which can give certain radiographic findings. An example would be, "Generalized radiolucency with scattered circumscribed defects". Under this category, a differential diagnosis involving eight separate disease processes each with several secondary processes are described. This approach in using a differential diagnosis is of paramount importance to anyone reading x-ray films. There is no synopsis of roentgen signs available other than this book which takes the approach of roentgen differential diagnosis. There are questions at the end of each chapter which are useful to the student for study.

"Synopsis of Roentgen Signs" is an exceptionally well written diagrammed book and most highly recommended for those who wish to approach the reading of x-ray films with a differential diagnosis instead of an idetic image or Geshalt approach.

PHILIP MEYERS, M. D.

Physical Diagnosis; by Ralph H. Major, and M. H. Delp, 6th Ed. Saunders, 1962, 355 p. $7.50.

The 6th edition of this standard work is, as before, well bound and printed; and its size is about right for sophomore students' use as an introduction into the field. The overall organization according to organ systems is sound and, in general the subjects are well covered for a small book.

There are several glaring omissions; There is no discussion of funduscopy. There is no discussion of differential diagnosis of cardial arrythmias at the bedside.

Some of the ancient pictures of gibbus and "empyema necessitans" should be replaced with plates of more common disorders. The amount of time spent in historical perspective seems excessive in an introductory book of small size.

In summary: This is a good book overall, but has some serious shortcomings.

JOHN M. TYLER, M. D.

W. B. SAUNDERS COMPANY features the following new editions in their full page advertisement appearing elsewhere in this issue:

BEESON and McDERMOTT — CECIL-LOEB TEXTBOOK OF MEDICINE

The New (11th) Edition of a world-famous text, with contributions by 173 noted authorities and details of over 800 diseases.

ANDREWS and DOMONKOS — DISEASES OF THE SKIN

A thorough revision of a classic text offering sound advice in dermatologic diagnosis and treatment.

AEGERTER and KIRKPATRICK — ORTHOPEDIC DISEASES

An up-to-the-minute book to aid you in the accurate diagnosis of bone disease.

PUBLICATIONS RECEIVED

Hoeber Medical Division, N. Y.: Clinical Gastroenterology, by Eddy D. Palmer, M. D. (2nd edit.).

Holt, Rinehart and Winston, Inc., N. Y.: The Risk Takers, by Hugh McLeave.

Office of the Surgeon General, Department of the Army, Washington: Internal Medicine in World War II: Volume II, Infectious Diseases, prepared and published under the direction of The Surgeon General.

W. B. Saunders Co., Phila.: Clinical Metabolism of Body Water and Electrolytes, by John H. Bland, M. D.

Charles C Thomas, Publisher, Springfield, Ill.: Medicine and the State, by Matthew J. Lynch, M. D. and Stanley S. Raphael, M. B., B.S.; Pleural Effusion; Some Infrequently Emphasized Causes, by Stephen Sulavik, M. D. and Sol Katz, M. D.

IN DIARRHEAS



Patient: W. O. **Age:** 45 **Sex:** F **Weight** 96

Diagnosis: Functional diarrhea

Results: Definite **Side Effects:** None

Comment: Patient has been on R-1132 (Lomotil) for fifteen months with definite improvement.

ACUTE

RECURRENT

CHRONIC

LOMOTIL® ANTIDIARRHEAL TABLETS / LIQUID

brand of Diphenoxylate Hydrochloride with Atropine Sulfate

PROMPT · SAFE · EFFICIENT



LOMOTIL directly controls the *mechanism* of diarrhea. Therefore, it acts to give symptomatic relief in all diarrheas.

Lomotil promptly arrests acute diarrhea and controls chronic or refractory diarrhea with a high degree of safety.

Pharmacologic considerations indicate that Lomotil acts on the smooth muscle of the intestines and thus lowers the excessive propulsive motility responsible for increased fluidity and frequency of stools. This localized action makes Lomotil unusually free of secondary effects.

By reducing excess propulsive motility, Lomotil assures safe, selective symptomatic control of virtually all diarrheas.

Dosage: For adults the recommended initial dosage is two tablets (2.5 mg. each) three or four times daily. Lomotil maintenance dosage may be as low as two tablets daily.

Lomotil is supplied as unscored, uncoated white tablets of 2.5 mg. and as liquid containing 2.5 mg. in each 5 cc. A subtherapeutic amount of atropine sulfate (0.025 mg.) is added to each tablet and each 5 cc. of the liquid to discourage deliberate overdosage. Recommended dosage schedules should not be exceeded.

Note: Lomotil is an exempt preparation under Federal narcotic statutes.

Detailed information and directions for use in children and adults are available in Physicians' Product Brochure No. 81. G. D. Searle & Co., P. O. Box 5110, Chicago 80, Illinois.

G. D. SEARLE & CO.

Research in the Service of Medicine

For the Patient Over 50 with Digestive Distress

KANUMODIC®

Each tablet contains methscopolamine nitrate, 2 mg.; and pentobarbital (Warning: May be habit-forming), 8 mg.; plus KANULASE® (cellulase standardized to 9 mg.; combined with pepsin, N.F., 150 mg.; glutamic acid hydrochloride, 200 mg.; pancreatin, N.F., 500 mg.; ox bile extract, 100 mg.).

TESTED—PROVED

Table I—Symptomatic Relief in 25 Patients
(totalling 100 symptoms)

	COMPLETE RELIEF	PARTIAL RELIEF	NO RELIEF	TOTAL SYMPTOMS
KANUMODIC	59	17	24	100
PLACEBO	1	33	61	95

In a second study, Kanumodic produced "highly gratifying symptomatic relief" in 46 of the 60 patients participating.

Tested in patients over 50*. . . The effectiveness of Kanumodic was matched against placebo response in a study involving twenty-five "over 50 patients" suffering from functional bowel distress. All patients complained of one or more symptoms. A follow-up study of 60 additional cases (average age, 55.3 years) was also conducted.

Proved in patients over 50* . . . The response noted in the pilot study is charted above.

*McHardy, G., and Balart, L.: Curr. Ther. Res. *4*:153, 1962.

Dosage: 1 or 2 tablets, swallowed whole with each meal.

Cautions: Federal law prohibits dispensing without prescription. Side effects such as dryness of mouth, blurring of vision, and urinary retention may occur occasionally with large doses. This product is contraindicated in the presence of glaucoma or prostatic hypertrophy. Glutamic acid hydrochloride is usually not given to patients with peptic ulcer.

DORSEY LABORATORIES • Lincoln, Nebraska

Question:

"What is a tranquilaxant?"

Answer:

"A drug that is both a tranquilizer and a muscle relaxant."

TRANCOPAL®
brand of
chlormezanone
is a tranquilaxant

As a tranquilizer, TRANCOPAL (chlormezanone/Winthrop) "is effective in the symptomatic treatment of anxiety."[1] Its tranquilizing properties are similar to those of other mild tranquilizers.[1] Furthermore, it relieves tension of both mind and muscle without interfering with normal activity or alertness.

The muscle relaxant properties[2] of this drug provide an extra dimension of effectiveness...relaxing the spasm which so frequently accompanies psychogenic disorders. Hence, the total therapeutic effect of TRANCOPAL (chlormezanone/Winthrop)—a true "tranquilaxant"—is to produce a relaxed mind in a relaxed body.

Unsurpassed Tolerance: Less than 3 per cent of patients develop side effects with TRANCOPAL (chlormezanone/Winthrop), such as occasional drowsiness, dizziness, flushing, nausea, depression, weakness and drug rash. If severe, medication should be discontinued. In most patients, however, side effects are minor and do not necessitate interruption of treatment. There are no known contraindications.

Available: 200 mg. Caplets® (green colored, scored), 100 mg. Caplets (peach colored, scored), each in bottles of 100.

Dosage: Adults, 1 Caplet (200 mg.) three or four times daily; in some patients 100 mg. three or four times daily suffices. Children (5 to 12 years), from 50 to 100 mg. three or four times daily.

Winthrop
WINTHROP LABORATORIES
New York 18, N.Y.

References: 1. A.M.A. Council on Drugs: J.A.M.A. 183:469 (Feb. 9) 1963. 2. Gruenberg, F.: Curr. Ther. Res. 2:1 (Jan.) 1960.

1785M

Browne-McHardy Clinics

MAIN CLINIC
3636 St. Charles Ave.
New Orleans 15, La.
TWinbrook 9-2376

GRAVIER ST. DIVISION
630 Gravier St.
New Orleans 12, La.
524-1605

VETERANS HIGHWAY DIVISION
8601 Veterans Memorial Hwy.
Metairie, La.
VErnon 3-7341

INTERNAL MEDICINE
Cardiology
Endocrinology
Gastroenterology
Hematology
Rheumatology

Donovan C. Browne, M. D.
Wiley H. Jenkins, M. D.
Robert C. Judice, M. D.
John T. Leckert, M. D.
G. Gordon McHardy, M. D.
Robert J. McHardy, M. D.
Swan S. Ward, M. D.
George E. Welch, M. D.
Guy T. Williams, M. D.

DERMATOLOGY
William Burroughs, M. D.

DISEASES OF THE CHEST
Joseph E. Blum, Jr., M. D.

EAR, NOSE and THROAT
Norma Kearby, M. D.

GENERAL SURGERY
Claude C. Craighead, M. D.
Raul G. Reyes, M. D.

OBSTETRICS and GYNECOLOGY
C. Gordon Johnson, M. D.
Robert I. Ayerst, M. D.
James M. Todd, Jr., M. D.

OPHTHALMOLOGY
Oliver H. Dabezies, M. D.

INDUSTRIAL MEDICINE
Ralph J. McDonough, M. D.
Albert W. Auld, M. D.

PEDIATRICS
Carl E. Kemmerly, M. D.
Milton H. Donaldson, M. D.

RADIOLOGY and RADIOTHERAPY
Charles O'Dowd Lilly, M. D.
Joseph B. Marino, M. D.
Walter McDowell, M. D.

UROLOGY
John F. Lally, M. D.

AUXILIARY SERVICES
Cytology
Diabetics
Electroencephalograph
Endoscopy
Medical Laboratory
Pharmacy
Physical Therapy
Pulmonary Function Studies

from *Curity*

A big aseptic advance in a tiny new package!

The New WEBCOL Alcohol Preps

Sterile — ethylene oxide kills alcohol resistant spores.

Convenient — ready for instant use.

Economical — no waste from evaporation, no dripping from excess saturation.

PEACOCK
SURGICAL COMPANY INC

1235 TEXAS AVENUE
SHREVEPORT, LOUISIANA



In Sprains, Strains and Muscle Spasm, 'Soma' Compound

numbs the pain...not the patient

A potent analgesic and
a superior muscle relaxant

1. A sprain or fracture is not a big clinical problem—but it does hurt. And if there is housework to do and kids to mind, the patient needs something to numb the pain.

2. A.P.C. compounds have limited usefulness; and the patient can buy them without your prescription. Unfortunately, most of them are too mild to be effective for sprains—and more potent products too often make the patient feel 'dopey'.

3. 'Soma' Compound is ideal in these cases. Since it contains both 'Soma' (carisoprodol) and acetophenetidin it is both a potent analgesic and a superior muscle relaxant; it also contains caffeine to offset any drowsiness *("numbs the pain...not the patient")*.

4. Why not try 'Soma' Compound? Dosage is 1 or 2 tablets q.i.d. For more severe pain, try 'Soma' Compound + Codeine. Dosage: 1 or 2 tablets q.i.d.

5. Hypersensitivity to carisoprodol may occur rarely. Codeine may produce addiction, nausea, vomiting, constipation or miosis.

Soma® Compound

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg.

Soma® Compound + Codeine

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg., codeine phosphate 16 mg. (Warning—may be habit forming.)

®WALLACE LABORATORIES / *Cranbury, N.J.*

CSO-9193

there is nothing "new" about Thorazine®



brand of
chlorpromazine

In the nine years since it became available to American physicians, Thorazine (chlorpromazine, SK&F) has been more widely used, more thoroughly investigated and more extensively documented than any other agent of its type.

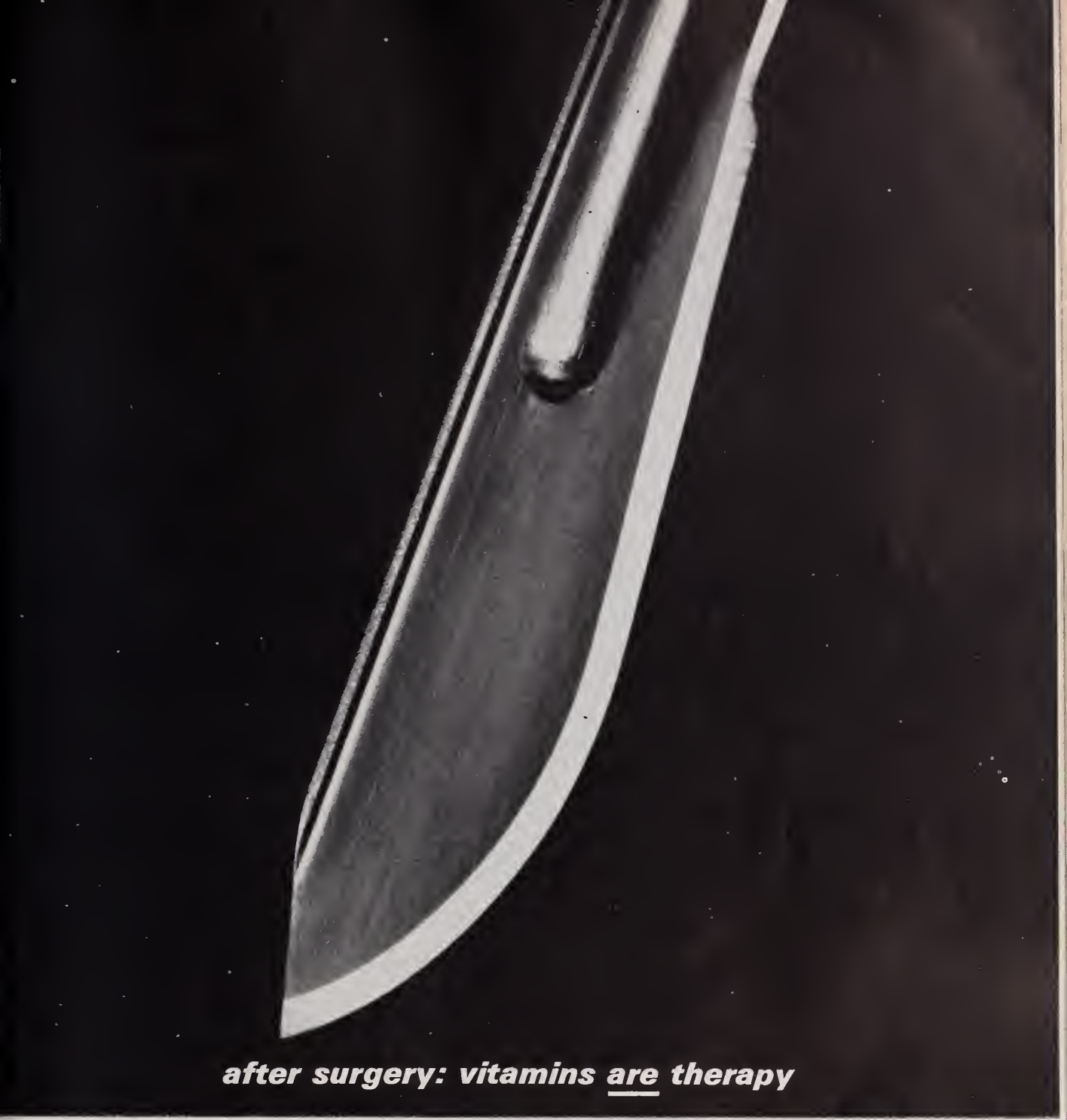
Its actions, effects—and side effects—are well known throughout the medical profession. Its efficacy has been clearly demonstrated. And when properly used, its advantages far outweigh any possible disadvantages.

This is why there is nothing "new" about Thorazine (chlorpromazine, SK&F). This is why it remains the first choice in many conditions—and the standard against which other agents are inevitably compared.

This is why it is one of the fundamental drugs in medicine.

SMITH KLINE & FRENCH
LABORATORIES, PHILADELPHIA

SK&F



after surgery: vitamins are therapy

Nutritional supplementation is basic to postoperative care. Therapeutic allowances of B and C vitamins help meet increased metabolic requirements and compensate for stress depletion. STRESSCAPS can set the patient on a more favorable course and contribute to full recovery.

FOR PROFESSIONAL

RECOMMENDATION ONLY

Each capsule contains: Vitamin B_1 (Thiamine Mononitrate)...10 mg. / Vitamin B_2 (Riboflavin)...10 mg. / Niacinamide... 100 mg. / Vitamin C (Ascorbic Acid)...300 mg. / Vitamin B_6 (Pyridoxine HCl)...2 mg. / Vitamin B_{12} Crystalline... 4 mcgm. / Calcium Pantothenate...20 mg. Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100.

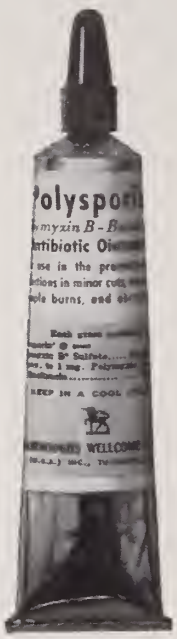
Lederle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.

6316-3

STRESSCAPS®

Stress Formula Vitamins Lederle

in treating topical infections, no need to sensitize the patient



USE 'POLYSPORIN'® brand POLYMYXIN B-BACITRACIN ANTIBIOTIC OINTMENT

broad-spectrum antibiotic therapy with minimum risk of sensitization

Caution: As with other antibiotic products, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **Supplied:** in ½ oz. and 1 oz. tubes.

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

One out of three *who died of cancer last year* ***could have been saved!***



To alert the practicing physician to suspect and diagnose cancer early — the American Cancer Society has available for you a film series of Physicians' Conferences on Cancer.

*Kinescopes of live, color, closed-circuit television programs, on early diagnosis and treatment of cancer, present outstanding clinicians.

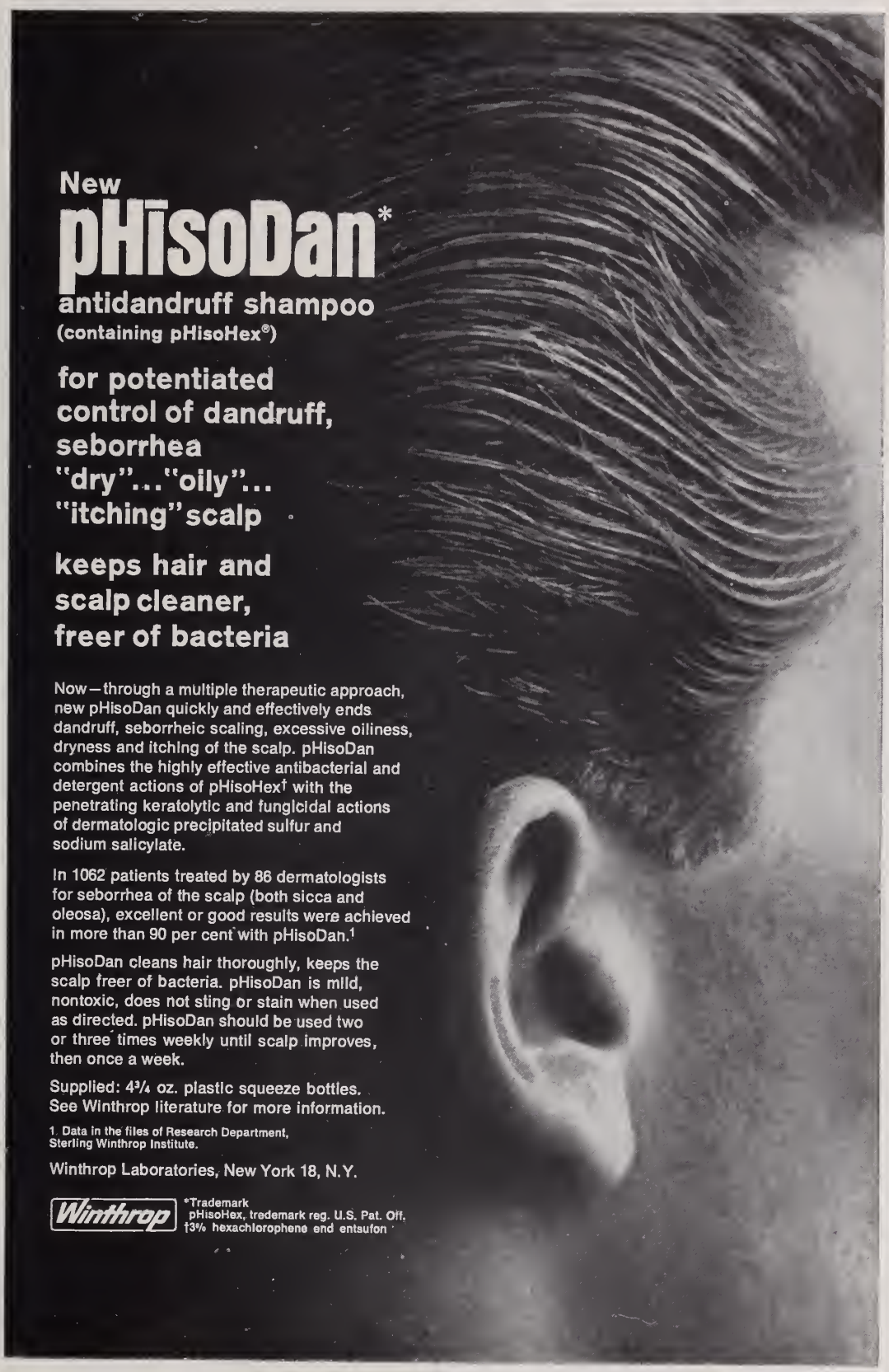
These 24 film programs — the nucleus of a course on cancer for the General Practitioner — cover virtually all cancer sites and types. They center around panel discussions, laboratory techniques, case histories, x-ray findings, histopathology, statistical data, and operative procedures.

Professional Films and services available to the doctor in his own community may be obtained through your Division of the

American Cancer Society

* APPROVED BY THE AMERICAN ACADEMY OF GENERAL PRACTICE FOR INFORMAL STUDY CREDIT (16 MM COLOR SOUND FILMS. RUNNING TIME 30-50 MINUTES)

AMERICAN CANCER SOCIETY, Louisiana Division, Inc., 822 Perdido Street, New Orleans 12, La.


New
pHisoDan*
antidandruff shampoo
(containing pHisoHex®)
for potentiated control of dandruff, seborrhea "dry"..."oily"... "itching" scalp
keeps hair and scalp cleaner, freer of bacteria
Now—through a multiple therapeutic approach, new pHisoDan quickly and effectively ends dandruff, seborrheic scaling, excessive oiliness, dryness and itching of the scalp. pHisoDan combines the highly effective antibacterial and detergent actions of pHisoHex† with the penetrating keratolytic and fungicidal actions of dermatologic precipitated sulfur and sodium salicylate.
In 1062 patients treated by 86 dermatologists for seborrhea of the scalp (both sicca and oleosa), excellent or good results were achieved in more than 90 per cent with pHisoDan.1
pHisoDan cleans hair thoroughly, keeps the scalp freer of bacteria. pHisoDan is mild, nontoxic, does not sting or stain when used as directed. pHisoDan should be used two or three times weekly until scalp improves, then once a week.
Supplied: 4¾ oz. plastic squeeze bottles. See Winthrop literature for more information.
1. Data in the files of Research Department, Sterling Winthrop Institute.
Winthrop Laboratories, New York 18, N.Y.
Winthrop
*Trademark
pHisoHex, tredemark reg. U.S. Pat. Off.
†3% hexachlorophene end entsufon

Lifts depression...



"I feel like my old self again!" Thanks to your balanced therapy with 'Deprol', her depression has lifted and her mood has brightened – while her anxiety and tension have been calmed. She sleeps better, eats better, and normal drive and interest have replaced her emotional fatigue.

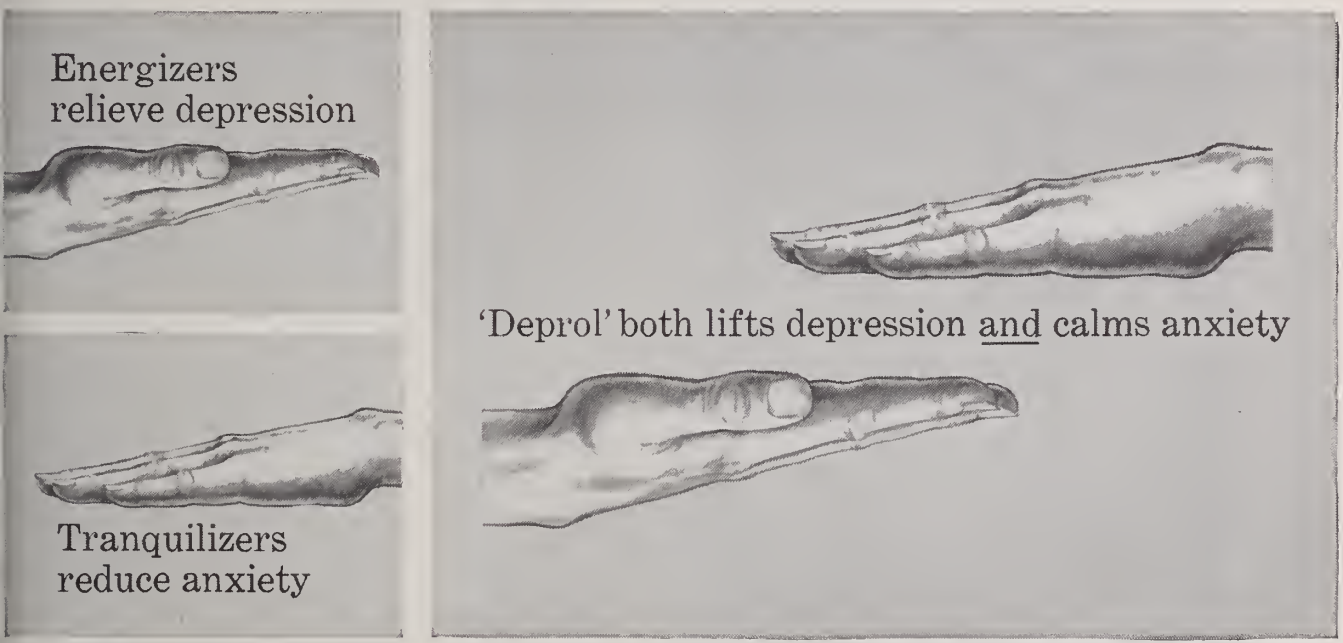
as it calms anxiety

Brightens mood...relaxes tension

Energizers may stimulate the depressed patient, but they often aggravate anxiety and insomnia. Tranquilizers may help the anxious patient, but they often deepen depression and emotional fatigue.

'Deprol' avoids these "seesaw" effects; it relieves both depression and anxiety. Moreover, it does not cause liver damage, psychotic reactions or changes in sexual function.

Slight drowsiness and, rarely, allergic reactions, due to meprobamate, and occasional dizziness or feeling of depersonalization in higher dosage, due to benactyzine, may occur. Meprobamate may increase effects of excessive alcohol. Use with care in patients with suicidal tendencies. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Withdraw gradually after prolonged use at high dosage.



Usual Dosage: 1 tablet q.i.d. May be increased gradually, as needed, to 3 tablets q.i.d.; with establishment of relief, may be reduced gradually to maintenance levels.

▲Deprol▲®

meprobamate 400 mg.
+ benactyzine 1 mg.

WALLACE LABORATORIES / *Cranbury, N.J.*

CO-9250

Digitalis

in its completeness



Each pill is
equivalent to
one USP Digitalis Unit

Physiologically Standardized
therefore always
dependable.

Clinical samples sent to physicians upon request.

Davies, Rose & Co., Ltd.
Boston, 18, Mass.

INDEX TO ADVERTISERS

Ames Company, Inc. 14

Browne-McHardy Clinics 20
Burroughs Wellcome & Co. 12, 24

Davies, Rose & Co., Ltd. 28
Dorsey Laboratories 18

Endo Laboratories 11

Katz & Besthoff, Ltd. 1

Lederle Laboratories 23
Lilly & Company, Eli Front Cover, 16
Louisiana Coca-Cola Bottling Co. 1
Louisiana State Board of Health Second & Third Covers

Majors Company, J. A. 1

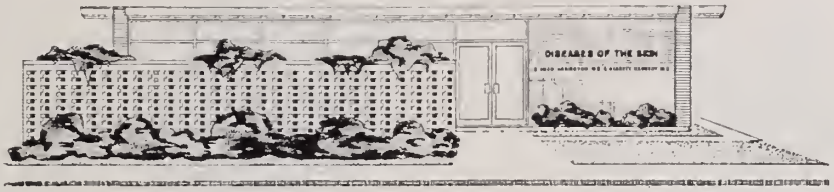
Parke, Davis & Company 4, 5
Peacock Surgical Co., Inc. 20
Poythress & Company, Inc., Wm. P. 6
Professional Cards 29, 30
Professional Management Service 10

Robins Co., Inc., A. H. 3
Roche Laboratories Back Cover

Saunders Company, W. B. 7
Schering Corporation 15
Searle & Company, G. D. 17
Smith Kline & French Laboratories 22

Wallace Laboratories 8, 9, 13, 21, 26, 27
Winthrop Laboratories 2, 19, 25

PROFESSIONAL CARDS



Courtesy Parking

Adjacent to Building

BARRETT KENNEDY, M. D.

V. MEDD HENINGTON, M. D.

WM. J. PERRET, M. D.
(Associate)

DERMATOLOGY

4522 MAGNOLIA STREET

TWinbrook 1-4452 — 1-4453

Green Clinic

709 South Vienna Street — Ruston, Louisiana

Surgery
Marvin T. Green, M.D.
LaMoyne C. Bleich, M.D.

Obstetrics and Gynecology
Carl L. Langford, M.D.
David M. Hall, M.D.

Pediatrics
Bruce W. Everist, M.D.
O. Wharton Brown, Jr., M.D.

Eye, Ear, Nose and Throat
Harold H. Harms, M.D.

Radiology
M. Ragan Green, M. D.

Internal Medicine
Henry S. Roane, M.D.
Robert W. Sharp, M.D.
Joe L. Smith, Jr., M.D.

Dentistry
L. Felton Green, D.D.S.
Benjamin C. Baugh, D.D.

The Baton Rouge Clinic

134 North 19th St. — DI 8-5361

SURGERY
J. Sabatier, M. D.
Charles Mosely, M. D.
Charles S. Peter, Jr., M. D.

GYNECOLOGY & OBSTETRICS
Melvin Schudmak, M. D.
J. P. Griffon, M. D.
Donald C. Diefendorf, M. D.

UROLOGY
Mortimer Silvey, M. D.

GENERAL PRACTICE
Shirley J. Woodford, M. D.

INTERNAL MEDICINE
Charles Prosser, M. D.
Roger Reynolds, M. D.
(Allergy)
Bruce L. Baer, M. D.
(Gastroenterology)
Douglas Gordon, M. D.
(Endocrinology)
David D. Kahn, M. D.
(Hematology)

EYE
George H. Jones, M. D.

PHILIP RONALD LORIA, M. D.

DISEASES OF THE SKIN

Dermoplaning — **Removal of Excessive Hair**

1104 Maison Blanche Bldg. — New Orleans 16, La.
By Appointment — 524-9621

PROFESSIONAL CARDS

JOHN C. HARDIN, JR.
D.D.S., M.D., F.A.C.S.
Maxillo-Facial & Oral Surgery
(Head and Neck Surgery)
121 Physicians & Surgeons Bldg., West
Phone 3-6901 Shreveport, Louisiana

DR. NATHAN H. POLMER
Physical Medicine—Rehabilitation
2209 Carondelet St.
2 - 5 P. M.
Off.: JA 2-0171 Res.: JA 2-3946

JAMES W. BURKS, JR., M. D.
DISEASES OF THE SKIN
SURGICAL PLANING FOR COSMETIC DEFECTS
FACILITIES FOR REMOVAL OF SUPERFLUOUS HAIR
925 Maison Blanche Bldg.
New Orleans 16, La. 529-3322

DR. R. ROSS, JR.
SKIN DISEASES
802 Pere Marquette Bldg. JA 2-0202

DR. RICHARD W. VINCENT
PLASTIC AND RECONSTRUCTIVE SURGERY
34 Maes Court — Medical Plaza
3600 PRYTANIA STREET
TWinbrook 5-4561

JUSTILLIEN H. FORET, M. D.
Practice Limited to Psychiatry
3706 Prytania Street
899-2618 By Appointment

CHARLES I. BLACK, M. D.
DISEASES OF THE SKIN
4550 North Boulevard DIckens 3-2841
Baton Rouge, Louisiana

Business Management Consultants
for Individual Practices, Groups and Clinics
PROFESSIONAL MANAGEMENT SERVICE
700 Maison Blanche Bldg.
524-1177 New Orleans 16, La.

BLAISE SALATICH, D.D.S., M.D.
PRACTICE LIMITED TO ORTHOPEDIC SURGERY
1212 Maison Blanche Building
JAckson 2-7697 By Appointment

THE OWENS CLINIC
for
PLASTIC AND RECONSTRUCTIVE SURGERY
2223 Carondelet St. New Orleans 13, La.
Telephone: JAckson 2-0106
After Hours — Call Doctors' Exchange WH 5-4141

DR. HARTWIG M. ADLER
EYE, EAR, NOSE AND THROAT
Hours by appointment.
3439 Prytania Street TW. 1-4094
New Orleans

DR. CARL N. WAHL
Practice limited to
MAXILLO-FACIAL AND PLASTIC SURGERY
4500 Magnolia Street 891-6615

FRANK H. MAREK, M. D.
Radiologist
444 So. Ryan Street Lake Charles, La.
Phone HE 3-6361
Practice Limited to
X-ray and Radium Treatment and Diagnosis

DR. HARRY ZOLLER
HEARING AND DEAFNESS
DISEASES AND SURGERY OF THE EAR
1109 Pere Marquette Building
JA. 5-2535 By Appointment

JOHN H. COUNCE, M. D.
Diseases of the Skin
1413 Delachaise St. New Orleans
Office Hours
By Appointment TW 1-2813

FREDERIC W. BREWER, M. D.
PRACTICE LIMITED TO PSYCHIATRY
1008 Maison Blanche Building
JA 5-4047 By Appointment

The Cancer Commission of the Louisiana State Medical Society



BREAST CANCER will strike one of every twenty women in the United States. At present rates, less than half of them will be cured.

Breast cancer is a disease of immense frustration for the physician... and is one of woman's deepest fears. Yet, for the individual patient, there *is* hope. Five-year cures result in 82% of *localized* cases.

Monthly breast self-examination and annual health checkups are essential in uncovering such cases. Essential, too, is person-to-person exchange between doctor and patient, to give women a chance to resolve their anxieties about this disease... anxieties which paralyze judgment and delay life-saving action.

The Society's newest film, "Breast Self-Examination," has been highly praised by physicians and laymen. A physician is present at each showing so that women may ask questions and be influenced to see their own doctors promptly about any breast problem.

The Society is working intensively on the breast cancer problem, through research and education. Through our concerted efforts... yours, doctor, and ours... we *will* prevail against this great enemy.

AMERICAN CANCER SOCIETY®

LOUISIANA DIVISION, INC.
204 Delta Building New Orleans 12, La.

Louisiana State Board of Health

W. J. REIN, M.D., President



Formerly nervous and tense, now better able to...

enjoy her family

This, in essence, is what happens when you place a patient on Librium (chlordiazepoxide HCl). Since this agent generally relieves anxiety and tension without dulling mental clarity or inducing drowsiness, most patients become better able to function normally, take an active interest in family and surroundings, meet and solve daily problems. This antianxiety agent is virtually free from extrapyramidal side effects, and does not produce or deepen depression.

DOSAGE: **Oral**—Usual adult dose in mild to moderate anxiety and tension is 5 or 10 mg, 3 or 4 times daily; in severe anxiety and tension, 20 or 25 mg, 3 or 4 times daily. **Parenteral**—To control acute conditions, the usual initial adult dose is 50 to 100 mg I.M. or I.V.; not more than 300 mg should be given during a 6-hour period. ☐ SIDE EFFECTS: **Oral**—Drowsiness and ataxia, usually dose-related, have been reported in some patients—particularly the elderly and debilitated. Paradoxical reactions, **i.e.,** excitement, stimulation, elevation of affect and acute rage, have been reported in psychiatric patients; these reactions may be secondary to relief of anxiety and should be watched for in the early stages of therapy. Other infrequent dose-related side effects have included isolated instances of minor skin rashes, minor menstrual irregularities, nausea, constipation, increased and decreased libido. **Parenteral**—Following parenteral administration some patients may become drowsy or unsteady. The injectable form has occasionally produced mild, transitory fluctuations of blood pressure. ☐ PRECAUTIONS: **Oral**—In elderly, debilitated patients, limit dosage to smallest effective amount to preclude development of ataxia or oversedation (not more than 10 mg per day initially, to be increased gradually as needed and tolerated). Until the correct maintenance dosage is established, patients receiving this agent should be advised against possibly hazardous procedures requiring complete mental alertness or physical coordination. Although this agent is a valuable aid in acute and chronic alcoholism, caution patients about possible combined effects with alcohol. Caution should be exercised in administering it to addiction-prone individuals. Careful consideration should be given to the pharmacology of any agents to be employed with Librium (chlordiazepoxide HCl)—particularly the MAO inhibitors and phenothiazines. Observe usual precautions in impaired renal or hepatic function. Periodic blood counts and liver function tests may be advisable in protracted treatment. **Parenteral**—Parenteral administration is indicated primarily in acute states, and patients receiving this form of therapy should be kept under observation, preferably in bed, for a period of up to three hours. Ambulatory patients should not be permitted to operate a vehicle following injection. The usual precautions of reduced dosage should be observed when treating patients with impaired renal or hepatic function. The injectable form should not be given to patients in shock or comatose states. Reduced dosage (usually 25 to 50 mg) should be used for elderly or debilitated patients, and for children.

Anxiety and tension relieved
Alertness maintained

Librium®
(chlordiazepoxide HCl)

the successor
to the tranquilizers

ROCHE
ROCHE

NAL of the

LOUISIANA STATE MEDICAL SOCIETY

JULY, 1963

LOUISIANA STATE MEDICAL SOCIETY

Formerly NEW ORLEANS MEDICAL and SURGICAL JOURNAL

OFFICIAL ORGAN OF THE LOUISIANA STATE MEDICAL SOCIETY

Copyright 1963 by
iana State Medical Society.
0 per annum, 35¢ per copy

Vol. 115, No. 7

Published monthly by
The Journal of the Louisiana State
Medical Society, Inc.
1430 Tulane Ave., New Orleans 12

Contents

Some Problems Involved in the Preservation of the Practice of Medicine ... 225
Norman A. Welch, M. D., Boston, Massachusetts

Individualization in the Surgical Management of Chronic Duodenal Ulcer 229
Walter F. Becker, M. D., New Orleans

Intestinal Perforation and Facial Fractures in an Automobile Accident Victim Wearing a Seat Belt ... 235
David Wyatt Aiken, M. D., New Orleans

Respiratory Diseases: A Community Problem ... 237
Sydney Jacobs, M. D., New Orleans



Doctor C. C. Bass Replies to Doctor Rowe ... 242
Charles C. Bass, M. D., New Orleans

Geriatric Program in a Mental Hospital: An Experiment ... 243
D. B. Barber, M. D., Alexandria

Editorial ... 247

Organization Section ... 249

Medical News Section ... 254

Book Reviews ... 256

Index to Advertisers ... 36

NEW YORK ACADEMY OF MEDICINE
JUL 26
LIBRARY

Simple diarrhea?

Control it with
safe / effective / economical / pleasant-tasting

Quintess®
(attapulgite compound, Lilly)

Available in 6-ounce plastic and 1-pint glass bottles.

Eli Lilly and Company • Indianapolis 6, Indiana, U.S.A.

Lilly

362030

Second Class Mail Privileges Authorized at New Orleans, Louisiana

With deep regret, the members of the Louisiana State Board of Health announce the demise of Dr. William J. Rein, President of the State Board and State Health Officer, on June 9, 1963.

Louisiana State Board of Health

EDGAR HULL, M. D.

Vice-President



BOTTLED UNDER AUTHORITY OF THE COCA-COLA COMPANY BY
THE LOUISIANA COCA-COLA BOTTLING CO., LTD.



You Know--

that we know!

TRUSTED MANY MILLIONS OF TIMES

GOOD DRUG STORES ONLY THE BEST
Katz & Besthoff, Inc.

Prescription Headquarters Since 1905

It's your professional privilege to replenish your ranks...

Give to medical education through AMA-ERF

AMA-ERF

American Medical Association
Education and Research Foundation
535 N. Dearborn St., Chicago 10, Illinois

MEDICAL BOOKS
Of All Publishers
Any book on Medicine, Surgery, and Nursing

J. A. MAJORS COMPANY

147 South Liberty St.
NEW ORLEANS 12, LA.

——Catalogs cheerfully sent upon request——



NTz Nasal Spray gives prompt, dependable decongestion of the nasal membranes for fast symptomatic relief of hay fever. The first spray shrinks the turbinates, restores nasal ventilation and stops mouth breathing. The second spray, a few minutes later, improves sinus ventilation and drainage. Excessive rhinorrhea is reduced.

NTz Nasal Spray also provides decongestive relief for head colds, perennial rhinitis and sinusitis. Supplied in leakproof, pocket-size, squeeze bottles of 20 ml. and in bottles of 30 ml. with dropper.

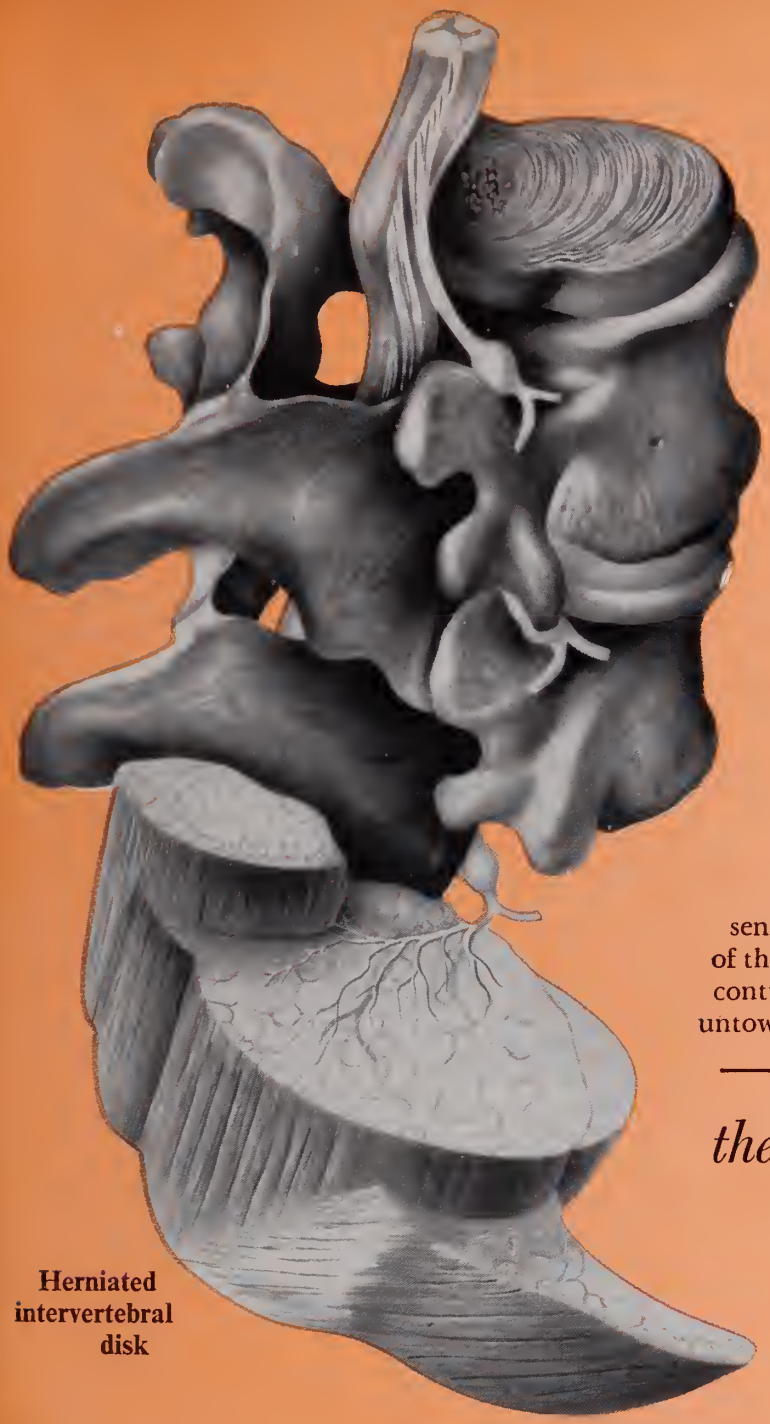
NTz® Nasal Spray

NTz is more than a simple vasoconstrictor. It contains [N]eo-Synephrine® HCl 0.5%—the efficacy of which is unexcelled—to shrink nasal membranes and provide inner space; [T]henfadil® HCl 0.1% for topical antiallergic action; and [Z]ephiran® Cl 1:5000 (antibacterial wetting agent) to promote the spread of the decongestant components to less accessible nasal areas.

NTz is well tolerated and does not harm respiratory tissues.

NTz, Neo-Synephrine (brand of phenylephrine), Thenfadil (brand of thenyldiamine) and Zephiran (brand of benzalkonium as chloride, refined), trademarks reg. U. S. Pat. Off. 1795M

Winthrop Laboratories
New York 18, N. Y.



Herniated intervertebral disk

When pain is prominently associated with skeletal muscle spasm, ROBAXISAL effectively combats both pain and spasm. If sedation is also indicated, prescribe ROBAXISAL-PH.

Side effects, such as lightheadedness, slight drowsiness, dizziness, and nausea may occur rarely in patients with intolerance to drugs, but they usually disappear on reduction of dosage.

Contraindicated for patients hypersensitive to aspirin or other components of the formulations. There are no specific contraindications to methocarbamol, and untoward reactions are not to be expected.

*the patient had 'pain & spasm'**



*Skeletal muscle spasm is a two-headed dragon of 'PAIN & SPASM'

ROBAXISAL®

Robins

Each pink-and-white laminated ROBAXISAL tablet contains:
ROBAXIN (methocarbamol, Robins) 400 mg. Aspirin (5 gr.) 325 mg.
U.S. Pat. No. 2770649

ROBAXISAL®-PH

Each green-and-white laminated ROBAXISAL-PH tablet contains:
ROBAXIN (methocarbamol, Robins) 400 mg. Phenacetin (1½ gr.) 97 mg. Aspirin (1¼ gr.) 81 mg. Hyoscyamine sulfate 0.016 mg. Phenobarbital (⅛ gr.) 8.1 mg.
(Warning: May be habit-forming)

A. H. ROBINS CO., INC., Richmond 20, Virginia

Helps the epileptic to realize his potential

DILANTIN®

(DIPHENYLHYDANTOIN SODIUM)

PARKE-DAVIS



"The most effective form of emotional approach remains the demonstration to the patient that the seizure phenomena can be adequately controlled with anticonvulsant medication."[1]

At present, diphenylhydantoin sodium is generally regarded as the standard in anticonvulsant medication because of its effectiveness in controlling grand mal and psychomotor seizures.[2-10] It possesses a wide margin of safety, and incidence of side effects is minimal.[4] With this agent, oversedation is not a problem.[3] Moreover, its use is often accompanied by improvement in the patient's memory, intellectual performance, and emotional stability.[11]

Indications: Grand mal epilepsy and certain other convulsive states.

Precautions: Toxic effects are infrequent: allergic phenomena such as polyarthropathy, fever, skin eruptions, and acute generalized morbilliform eruptions with or without fever. Rarely, dermatitis goes on to exfoliation with hepatitis, and further dosage is contraindicated. Eruptions then usually subside. Though mild and rarely an indication for stopping dosage, gingival hypertrophy, hirsutism, and excessive motor activity are occasionally encountered, especially in children, adolescents, and young adults. During initial treatment, minor side effects may include gastric distress, nausea, weight loss, transient nervousness, sleeplessness, and a feeling of unsteadiness. All usually subside with continued use. Megaloblastic anemia has been reported. Nystagmus may develop. Nystagmus in combination with diplopia and ataxia indicates dosage should be reduced. Periodic examination of the blood is advisable.

DILANTIN Sodium (diphenylhydantoin sodium) is available in several forms including Kapseals,® 0.03 Gm. and 0.1 Gm., bottles of 10Q and 1,000.

REFERENCES: (1) Hammill, J. F.: J. Chron. Dis. 8:448, 1958. (2) Roseman, E.: Neurology 11:912, 1961. (3) Bray, P. F.: Pediatrics 23:151, 1959. (4) Chao, D. H.; Druckman, R., & Kellaway, P.: Convulsive Disorders of Children, Philadelphia, W. B. Saunders Company, 1958, p. 120. (5) Crawley, J. W.: M. Clin. North America 42:317, 1958. (6) Livingston, S.: The Diagnosis and Treatment of Convulsive Disorders in Children, Springfield, Ill., Charles C Thomas, 1954, p. 190. (7) Ibid.: Postgrad. Med. 20:584, 1956. (8) Merritt, H. H.: Brit. M. J. 1:666, 1958. (9) Carter, C. H.: Arch. Neurol & Psychiat. 79:136, 1958. (10) Thomas, M. H., in Green, J. R., & Steelman, H. F.: Epileptic Seizures, Baltimore, The Williams & Wilkins Company, 1956, pp. 37-48. (11) Goodman, L. S., & Gilman, A.: The Pharmacological Basis of Therapeutics, ed. 2, New York, The Macmillan Company, 1955, p. 187.

14863

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit 32, Michigan



mudrane®

the bronchodilator
with the intermediate dose of KI

A combination of the four most widely used drugs for treatment of asthma. Each tablet contains Aminophylline 130 mg., Ephedrine HCl 16 mg., Phenobarbital 22 mg. (Warning: May be habit forming), Potassium Iodide 195 mg.—compounded for prompt absorption and balanced action, and buffered for tolerance.

Dosage in asthma, emphysema, bronchiectasis, chronic bronchitis: One tablet with a full glass of water, 3 or 4 times a day.

Precautions: The usual precautions for aminophylline-ephedrine-phenobarbital mixtures. Iodides may cause nausea, and very long use may cause goiter. Discontinue if symptoms of iodism develop.

Contraindications of Iodides: Tuberculosis, pregnancy (to protect the fetus against possible depression of thyroid activity).

mudrane® GG

The Mudrane GG formula is identical to Mudrane except that Glyceryl Guaiacolate, 100 mg. replaces the Potassium Iodide as the mucolytic-expectorant.

Glyceryl Guaiacolate has no known side effects.

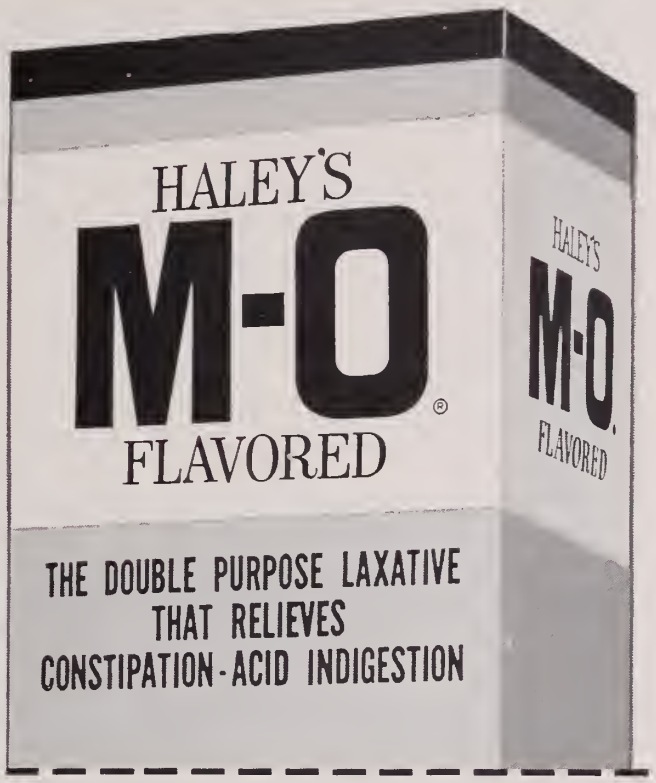
Caution: Federal law prohibits dispensing these products without prescription

COMPLETE INFORMATION AND CLINICAL SAMPLES SENT UPON REQUEST

Dispensed in bottles of 100 and 1000 tablets

WM. P. POYTHRESS & COMPANY, INC., RICHMOND, VA.
Manufacturers of ethical pharmaceuticals since 1856

NOW ALSO IN FLAVORED FORM!



BOTTLES OF
4 OZ., 8 OZ.,
1 PT., 1 QT.

Antacid–Laxative–Lubricant to help correct constipation

Magnesium Hydroxide plus pure mineral oil make *Haley's M-O* a smooth working antacid-laxative-lubricant that efficaciously relieves constipation and attendant gastric hyperacidity.

The oil globules in *Haley's M-O* are minutely subdivided to assure uniform distribution and thorough mixture with intestinal contents. Oil leakage is thus avoided and a comfortable evacuation is effected through the stimulation of normal intestinal rhythm and blunted defecation reflex.

May we send samples for your evaluation? Just write:

THE CHAS. H. PHILLIPS CO.

Division of Sterling Drug Inc., 1450 Broadway, New York 18, N. Y.

Get your low-back patient back to work in days instead of weeks



You can expect rapid results from 'Soma' (carisoprodol)—because this unique drug breaks up both the spasm and pain of low-back syndrome at the same time.

Your patients will usually begin to feel better within a few hours. And as Kestler demonstrated in a controlled study of 212 consecutive patients with low-back problems: the average time for full recovery was only 11.5 days with 'Soma' (carisoprodol), 41 days without it. (J.A.M.A., April, 1960.)

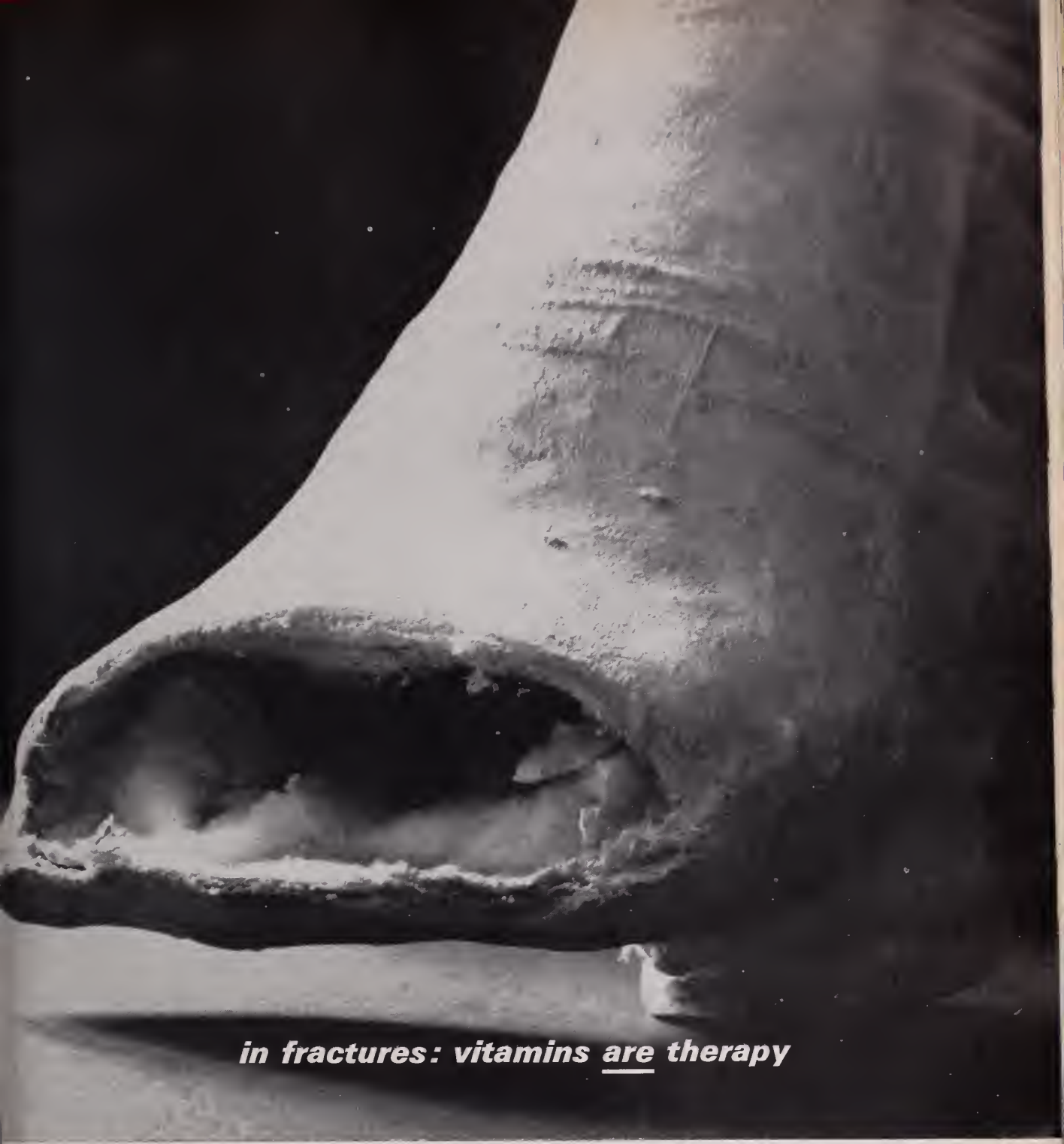
Carisoprodol seldom produces side effects. Occasional drowsiness may occur, usually at higher than recommended dosage. Individual reactions may occur rarely.

USUAL DOSAGE: ONE 350 MG. TABLET Q.I.D.

The muscle relaxant with an independent pain-relieving action

Soma®
carisoprodol

Wallace Laboratories
Cranbury, New Jersey



Few factors are more fundamental to tissue and bone healing than nutrition. Therapeutic allowances of B and C vitamins are important for rapid replenishment of vitamin reserves which may be depleted by the stress of fractures. Metabolic support with STRESSCAPS is a useful adjunct to an uneventful recovery.

FOR PROFESSIONAL

RECOMMENDATION ONLY

Each capsule contains: Vitamin B_1 (Thiamine Mononitrate)...10 mg. / Vitamin B_2 (Riboflavin)...10 mg. / Niacinamide... 100 mg. / Vitamin C (Ascorbic Acid)...300 mg. / Vitamin B_6 (Pyridoxine HCl)...2 mg. / Vitamin B_{12} Crystalline... 4 mcgm. / Calcium Pantothenate...20 mg. Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100.

Lederle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.

6317-3

STRESSCAPS®

Stress Formula Vitamins Lederle

PROFESSIONAL MANAGEMENT SERVICE CAN HELP YOU BE A

FULL-TIME DOCTOR



Delegation of time-consuming work not requiring your training and experience releases you to more productive and rewarding work only you can do. The Professional Management Service is equipped to save you time . . . to relieve you and your staff of both menial and critical business tasks . . . and to increase your income. Our service offers you the benefits of specially trained, and equipped personnel under the careful supervision of specialists in medical business management, however you maintain complete control of your business activities!

We Offer These Services -

ACCOUNTS RECEIVABLE MANAGEMENT Professional Management Service trained bookkeepers, electric equipment and modern, proven-in-use methods designed to the needs of medical accounts are used to minimize the business workload in your office. Professional, accurate, itemized statements encourage prompt payment. This service pays big dividends in good will, time savings and net dollar return.

CONSULTATION Professional Management Service also includes special services, as needed, such as counseling on all insurance, investments, office personnel, fees, office lay-out, etc.

BASIC BOOKKEEPING SERVICE Formal accounting records are maintained by Professional Management Service. This includes income and expenses, depreciation, capital accounts, monthly financial report and tax return preparation.

PRE-COLLECTION PROGRAM A constructve approach to slow-paying accounts, subject to your control, this service is used with the ARM Service, above, or to supplement billing by your own staff. Custom designed to your needs and policies, but all time-consuming work is done by Professional Management Service.

COMPREHENSIVE BUSINESS SERVICE Most beneficial to physicians is the assumption of the complete business side of practice by the Professional Management Service in a co-ordinated, comprehensive service encompassing all functions named above.



PROFESSIONAL MANAGEMENT SERVICE

New Orleans, Louisiana

700 MAISON BLANCHE BLDG., PHONE 524 1177

A Specialized Service . . . Exclusively Professional



throughout the wide middle range of pain—control with one analgesic formula

PERCODAN®

Each scored yellow PERCODAN* *Tablet contains 4.50 mg. dihydrohydroxycodeinone HCl (Warning: May be habit-forming), 0.38 dihydrohydroxycodeinone terephthalate (Warning: May be habit-forming), 0.38 mg. homatropine terephthalate, 224 mg. aspirin, 160 mg. phenacetin, and 32 mg. caffeine.*

In a comprehensive range of indications marked by moderate to moderately severe pain, PERCODAN *assures speed, duration, and depth of analgesia by the oral route... acts within 5 to 15 minutes... usually provides uninterrupted relief for 6 hours or longer with just 1 tablet... rarely causes constipation.*

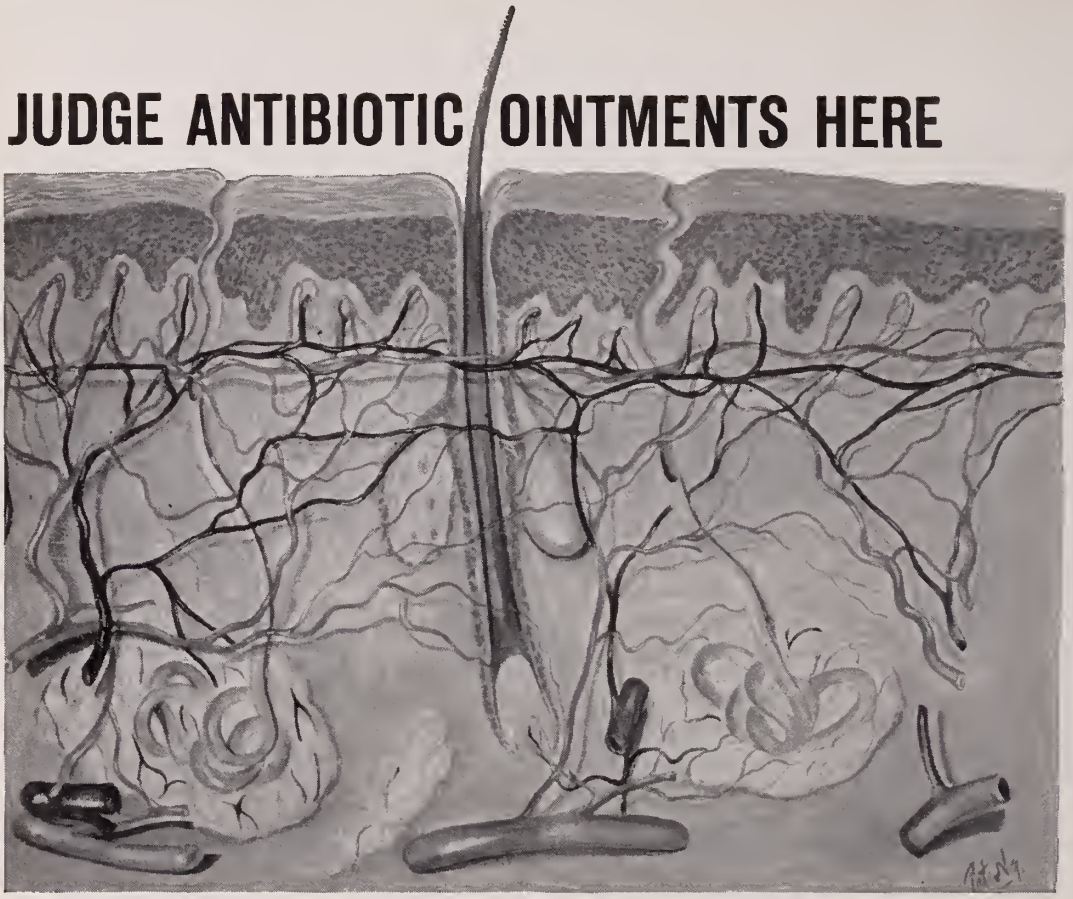
Average Adult Dose—1 tablet every 6 hours. **Side Effects and Contraindications**—Although generally well tolerated, PERCODAN may cause nausea, emesis, or constipation in some patients. PERCODAN should be used with caution in patients with known idiosyncrasies to aspirin or phenacetin, and in those with blood dyscrasias. **Also available:** PERCODAN®-DEMI, containing the complete PERCODAN formula but with only half the amount of salts of dihydrohydroxycodeinone and homatropine. Both products are on oral Rx in all states where laws permit. Narcotic order required. **Literature on request.**

ENDO LABORATORIES Richmond Hill 18, New York

Endo®

*U. S. Pats. 2,628,185 and 2,907,768

JUDGE ANTIBIOTIC OINTMENTS HERE



Results on skin are final proof of any topical antibiotic's effectiveness

No in vitro test can duplicate a clinical situation on living skin. 'Neosporin' (polymyxin B—bacitracin—neomycin) Antibiotic Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and rarely sensitizes.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs.

Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.

Complete literature available on request from Professional Services Dept. PML.

'NEOSPORIN'®

brand

POLYMYXIN B-BACITRACIN-NEOMYCIN ANTIBIOTIC OINTMENT

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.



The new or early hypertensive patient



The middle-aged hypertensive woman



The geriatric hypertensive patient



The overweight hypertensive patient



When depression or peptic ulcer adds problems



Effective blood pressure regulation for the many faces of hypertension[1-5]

Important note: For best results with CAPLA (mebutamate)

To demonstrate its blood-pressure-lowering effect, 'Capla' (mebutamate) must have been taken on schedule on the day of the patient's checkup. The maximum hypotensive response occurs within 2-4 hours. Because 'Capla' (mebutamate) is promptly excreted, q.i.d. dosage should be maintained for consistent results.

Product Information: 'Capla' (mebutamate) is indicated for control of hypertension, either alone in mild cases, or in conjunction with diuretics or peripherally acting hypotensive agents in more severe cases. Its mild tranquilizing properties are often found an additional benefit to its antihypertensive action.

Drowsiness and occasional lightheadedness, usually transient, are often signs of dosage higher than necessary for therapeutic effect. There are no known contraindications to mebutamate.

Usual Dosage: One 300 mg. tablet 3 or 4 times daily, before meals and at bedtime. Dosage should be adjusted to individual requirements; for example, older patients may require lower dosage.

Composition: Each tablet contains mebutamate, 300 mg.

Supplied: Bottles of 100 white, scored tablets. Literature and samples to physicians on request.

References: 1. Corcoran, A. C., and Loyke, H. F.: J.A.M.A. *181*:1043, Sept. 22, 1962. 2. Costello, A. C.: M. Times *91*:53, Jan. 1963. 3. Holloman, J. L. S., Jr.: J. Nat. M. A. *54*:94, Jan. 1962. 4. Kheim, T., and Kountz, W. B.: New York J. Med. *62*:1596, May 15, 1962. 5. Leslie, C. H.: J. Am. Geriatrics Soc. *10*:85, Jan. 1962.

6/63 63WL36K-12

Wallace Laboratories
Cranbury, N. J.

neither **tension**, nor **spasm**,
nor **stasis**
stays this patient
from his
appointed rounds



DECHOLIN-BB®

. especially when
UPPER G.I. COMPLAINTS
have biliary implications

for nervous **tension**

for smooth-muscle **spasm**

for biliary/intestinal **stasis**

Each Tablet Contains:

BUTABARBITAL SODIUM
15 mg (¼ gr.).
WARNING: May be habit forming

BELLADONNA EXTRACT
10 mg (⅙ gr.)

DEHYDROCHOLIC ACID
250 mg. (3¾ gr.)

Average adult dose: 1 or, if necessary, 2 tablets three times daily. **Precautions:** Observe patients periodically for increased intraocular pressure and barbiturate habituation or addiction; caution drivers against possible drowsiness. **Side effects:** Dehydrocholic acid may cause transitory diarrhea; belladonna may cause blurred vision and dry mouth. **Contraindications:** Biliary tract obstruction, acute hepatitis, glaucoma, prostatic hypertrophy. **Available:** DECHOLIN-BB, bottles of 100 tablets. **Also:** DECHOLIN® with Belladonna (dehydrocholic acid, 250 mg.; belladonna extract, 10 mg.) and DECHOLIN® (dehydrocholic acid, 250 mg.), bottles of 100 and 500 tablets.

AMES
COMPANY, INC.
Elkhart, Indiana
Toronto, Canada

Schering

in dermatoses amenable to topical steroid therapy

METI-DERM®

Prednisolone, 16.6 mg. in 50 Gm. container and 50 mg. in 150 Gm. container; in nonsensitizing vehicle—isopropyl myristate with inert propellants—trichloromonofluoromethane, dichlorodifluoromethane.

AEROSOL COVERS

reaches every part of the lesion, any area of involvement • instant cooling, soothing effect • controls the itch, delimits the area of erythema and edema • nonfluorinated—avoids risk of steroid absorption • easy to carry and apply away from home—no residue on the skin



Clinical Considerations: In allergic dermatoses, until the specific causative agent is identified and removed from the patient's environment, the condition may be expected to recur when therapy is terminated. If infection is present, appropriate antibacterial measures should be taken. METI-DERM (prednisolone) Aerosol should not be sprayed around the eyes. Contents of can are not flammable but are under pressure. Containers should be stored in a cool place and neither punctured nor incinerated. For complete details, consult Schering literature available from your Schering Representative or Medical Services Department, Schering Corporation, Union, New Jersey.

® prednisolone topical, Schering.

S-193R



We like visitors. We like to show them our modern equipment and latest research facilities, our exacting manufacturing techniques and unexcelled quality standards. Up to a point, that is. A white line provides the barrier that discourages further exploration. It means look but don't cross. It is a safeguard against inadvertent mishandling or misplacing of products—another precaution in an endless list of rules contributing immeasurably to the quality of the finished product.

Eli Lilly and Company • Indianapolis 6, Indiana, U.S.A.

Lilly

390178

The Journal

of the

Louisiana State Medical Society

$4.00 Per Annum, 35c Per Copy
Vol. 115, No. 7

JULY, 1963

Published Monthly
1430 Tulane Avenue, New Orleans 12, La.

Some Problems Involved in the Preservation of the Practice of Medicine*

NORMAN A. WELCH, M. D.†
Boston

IT is readily apparent that we are today faced with two opposing philosophies regarding the best method for handling the economic aspects of hospital and medical care. On the one hand, there are those who believe in a fundamental private enterprise system with the government playing only a minor role. On the other end of the tug-of-war rope are those who preach that only government can adequately and properly handle this function of our society.

Arrayed on one side of the battle line are the hospitals of this country with their glorious record of growth and achievment which make them the envy of every other country in the world, and the medical profession with a similar record of outstanding devotion to the improvement of medical care for our people. Opposed to us are a relatively small group who for the past quarter century have devoted their energies to forcing on us a socialistic system of hospital and medical care. Included in this group are some prominent labor leaders who for some reason or other believe they are God's gift to the working man and that they must constantly agitate for something or they may have to go back to the ordinary ranks of labor.

Let me illustrate what I mean. At the present time we have in Massachusetts a Legislative Commission studying and investigating Blue Cross, Blue Shield and the hospitals. From a hearing on hospital costs held at the State House on April 26, 1963 I quote the following: "A labor representative proposed today that hospitals be treated as public utilities, complete with government regulation of charges as well as costs; that even privately operated hospitals are actually quasi-public institutions; that the State Bureau of Hospital Costs and Finances be enlarged to handle the new work. Charges would be set by the state after public hearings. Under this plan hospitals would be treated the same as railroads, bus companies, electric and gas companies." This was the testimony of the secretary of the AFL-CIO Committee on Medical Care.

Why in the name of heaven labor has fought for years to gain its present bargaining position with industry and now wants to subject its members to government control of their medical care I will never understand. Having grown up in a family that fought for the rights of

* Presented at the Eighty-third Annual Meeting of the Louisiana State Medical Society, New Orleans, May 6, 1963.

† Speaker, House of Delegates, American Medical Association.

labor, makes this situation even more ironic to me.

Even more difficult to comprehend is labor's attitude toward the Forand and King-Anderson type of legislation. If I were a member of one of these unions I would certainly resent the attempt to make all those with incomes of $100 a week or less, pay for the hospitalization of a group of people, many of whom are perfectly capable of handling their own hospital and medical problems. Of course, there is estimated to be only 35 to 55 billion dollars of cost to take care of this group until the end of their earthly sojourn. This is not considered to be any burden on the individual making $100 or less per week.

This attitude toward our older people is an insult to them. They are just as good citizens as any of us and I am sure they do not want government charity paid for by the lower income group of wage earners.

The medical profession and hospitals have always supported the philosophy of providing help to those in financial difficulty; that is why the American Medical Association was a sponsor of the Kerr-Mills bill. If this great country of ours is to progress as our President would like it to do and if there is any good reason for increasing our gross national product that reason should be so that our people would be better off and fewer and fewer would need help. If this is to be true then the Kerr-Mills legislation will become less and less expensive. Contrast this with the permanency of social security taxes and who could have any question about the choice.

Sometimes I wonder where we get some of the people in Massachusetts. When I listen to them or read their comments I can't help but visualize Plymouth Rock and meditate on the first winter of those Pilgrims. I even occasionally mentally ride with Paul Revere to Lexington and Concord and I can see some of those poor farmers defending what they believed was right and proper. Occasionally, when I sail down Boston Harbor, I wonder where they dumped the King's tea, and as I drive by Bunker Hill I think of Dr. Joseph Warren and the terribly important part he played in our revolution. Then this brings to mind the five doctors who signed the Declaration of Independence.

As I reminisce about history I wonder how we have now come to the point of being gradually pressured into a position of being made wards of a paternalistic government.

I spoke about wondering about some of the things being said in Massachusetts from time to time. On April 24, 1963, five days after the anniversary of Paul Revere's ride, a former Social Security Administrator in a Boston speech said only 116,000 persons in this country are receiving Kerr-Mills aid although half the 18 million people over 65 years of age have incomes of $1000 a year or less. And I say, so what! My father had an income of less than $1000 a year at that age and my mother had no income at all, so if you consider them together they each had an income of less than $500 a year. If they were living today they would not need Kerr-Mills help because their children could adequately finance any illness and did so when they had need of such financing.

Oh, yes, I know, the answer to that is the burden should not be placed on their children. The planners not only want you to cry for the old people but they want you to cry for me too. It is so much nicer to put the burden on the poor $100 a week worker than it is for me to carry it. A few days ago I listened to a representative of the Department of Health, Education and Welfare in a sermon with which I thoroughly disagreed. One of the statements made was that unless this was done under the Social Security system you would jeopardize the education of the older person's grandchildren. Well, let me tell you, ladies and gentlemen, the education of their grandchildren has already been jeopardized. You tell me how the $100 a week family with 4 or 5 children can pay tuition of $1800 to $2500 a year. To help prevent this interference with family private initiative they now want to increase Social Security taxes to 9 and

¾ per cent and yet by inflation and loss of dollar value they have already severely compromised the ability of the individual to care for his children's education. Here is another by-product of big government. More and more taxes will have to be taken from the low wage earner in order that a gracious and munificent government will pay for the education of their children.

It is wonderful of them to be so considerate of me that they do not want me to have the burden of taking care of my parents but I still think of Paul Revere and Dr. Joseph Warren, and occasionally, I even think of ancient Greece and Rome.

When the insurance companies in Connecticut banded together to write their over 65 program it was surprising how many children paid the premiums for their parents. You know, there are still a lot of people in this country who believe in self-respect and have great pride in assuming what they believe is their family financial responsibility. The Judao-Christian philosophy has not been abandoned and there are many who are intensely interested in returning some measure of financial devotion to those who worked to give them a start in life.

In Massachusetts we have a very successful Blue Cross-Blue Shield program, covering some 2,700,000 people, or over half the population. We have a basic plan with no deductible, a prolonged illness and a master medical program. At no time has there been a rate increase because of the fees paid to doctors. In spite of this we are now undergoing our second investigation and this time they threw in an investigation of hospital costs. The first legislative inquiry sort of blew up when some smart reporters checked the expense accounts of a trip of the committee to Florida. This was a trip to visit the Florida Blue Cross-Blue Shield plan which they never got around to doing. As a result, for days the committee made headlines in a most unpleasant fashion.

The chief proponents of the present investigation were a group of insurance brokers who would like us to be taxed in the same way the commercial carriers pay real estate and premium taxes. Now, one would think this wouldn't make any sense to a legislator because of the resultant increased premium to their constituents but this is the way things go. I have already spent two days before this commission and will devote May 8 to the same productive effort. If you are doing a successful job and an increasing number of people want to buy your product you will still be investigated and studied. God help you if you don't do a good job.

One result of prepayment arrangements is the increased awareness of people of the costs of hospital and medical care. In the old days, only the individual who suffered an illness had the financial experience but now so many people are enrolled and pay premiums that any increased cost reflected in increased premiums affects so many more people that it is only natural for more questions to be raised when such an instance occurs.

I am sure government can not provide as good a program at a cost equal to that of a good Blue Cross-Blue Shield program. In fact, I can't understand government wanting to get involved in such an effort. Any of you having experience with prepayment plans know the headaches associated with increased costs and adjustment of premiums. Think of having to raise Social Security taxes above 10 per cent when hospital costs go up and one has to maintain some vestige of solvency. If I were a legislator I would consider this more dangerous than the plague unless I did not expect to be in Congress long or knew I had a fatal illness. I still have a great deal of faith in our legislators and I firmly believe they understand the seriousness of the proposed legislation as far as the future tax burden of this country is concerned.

Left alone, this problem will be adequately cared for in time with improved and extended prepayment plans. Tampering with it in the form of permanent, continually increasing Social Security taxes will not only increase the problem for future generations and will spell the end of our voluntary prepayment system, the

freedom and independence of our hospitals and of the medical profession and stay or regress the progress which we have made over the past twenty-five years.

Mr. Churchill said at the time the United Kingdom faced its greatest peril that he could offer his people only blood, sweat and tears. I am sure you may have only hard work, anger, and disillusionment in the near future but the will to defend your position and beliefs must prevail.

Our President has said "Ask not what your country can do for you but what you can do for your country." This is a doctrine which the medical profession has long espoused. This is the philosophy of free enterprise. This is not the spirit of the King-Anderson type of legislation which doesn't even wait for the people to ask what the government can do for them but says to the people you must take this whether you can or want to take care of yourselves. I would like to say to the government, please don't force the low wage earner to pay for the hospitalization and medical care of my brothers and sisters because there are other and better ways to handle the problem of their illness if and when it arises.



Why Certification of All Antibiotics?

Our opposition to the extension of certification of the antibiotics . . . rests in large measure on the fact that the concept of certification violates the basic principle upon which regulatory enforcement of drug standards has stood since the first federal law in this field was enacted in 1906. . . . Antibiotic producers pay the Food and Drug Administration fees totaling nearly $1 million a year to reproduce tests they have already conducted to demonstrate the satisfactory character of the lots in question. These fees must of course show up in the final selling price of the antibiotic, regardless of how dubious is the value of the double check that the certification program provides. It is the position of the U.S.P. Board of Trustees that there is no longer a need for treating antibiotics as a class any differently from other classes of drugs.—Lloyd C. Miller, Ph.D., Director of Revision of the United States Pharmacopeial Convention, to House Committee on Interstate and Foreign Commerce, June 21, 1962.

Individualization in the Surgical Management Of Chronic Duodenal Ulcer*

• The author discusses the rationale, advantages, limitations and results of the more commonly used operations for duodenal ulcer. He suggests that the best results are to be obtained by the surgeon who has mastered each of these procedures, and who carefully selects the one most appropriate to the individual patient.

WALTER F. BECKER, M. D.†
New Orleans

YOU conferred upon me a real distinction by electing me your president at the meeting of the Association last year, and I am most grateful to you.

Fifteen years ago at the time of the organization of this society there was no doubt in the minds of most surgeons that subtotal gastrectomy was the operation of choice for duodenal ulcer and that the results of the operation were excellent.

Today this is a much more controversial matter. There now appears to be an increasing willingness to recognize that even in experienced hands there is a substantial mortality rate for gastric resection and that undesirable after effects are not uncommon.

This is not to say that radical gastrectomy has not produced a host of excellent clinical results; but it has also produced enough criticisms and dissatisfactions that more and more surgeons are turning to alternative procedures such as vagotomy with a limited gastrectomy and vagotomy with a drainage operation.

The ideal operation for peptic ulcer would cure the ulcer diathesis with a low mortality and with minimal after effects. None of the currently employed operations fulfills these criteria.

It shall be my purpose to discuss the rationale, advantages, limitations, and results of the more commonly used operations for duodenal ulcer; and to suggest that the best results are to be obtained by the surgeon who has mastered each of these procedures, and who carefully selects the one most appropriate to the individual patient.

Elective Operations for Chronic Duodenal Ulcer

Gastroenterostomy (Figure 1) was one of the simplest operations ever devised for duodenal ulcer, and the procedure enjoyed almost universal acceptance for the first thirty years of the current century. The

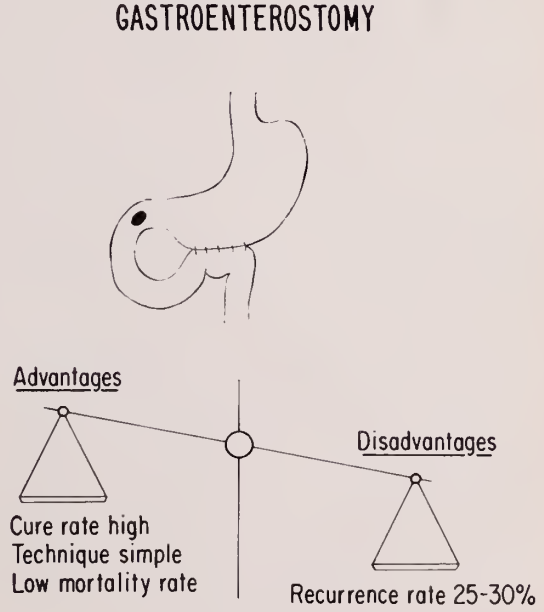


Figure 1

* This paper, in extended form, was presented as a presidential address at the annual meeting of Surgical Association of Louisiana, New Orleans, November 4, 1962.

† From the Department of Surgery, Louisiana State University School of Medicine, New Orleans, Louisiana.

ulcer almost invariably healed as the result of diversion of acid gastric chyme, hastening of gastric emptying and regurgitation of alkaline duodenal contents into the stomach. The operation was technically simple; and thirty years ago the famous British surgeon, Moynihan,[12] reported having done it a thousand times with only one fatality.

Despite these advantages it finally became evident that gastroenterostomy alone was a poor operation for duodenal ulcer, because it was followed by the development of a stomal ulcer in 25 to 30 per cent of the cases. However, it is still the operation of choice in the occasional poor-risk patient with pyloric obstruction and low gastric acidity.

For the next twenty-five years radical gastrectomy, (Figure 2) was, and perhaps still is, the elective operation most commonly performed for complicated duodenal ulcer. Although it was a much more formidable operation than simple gastroen-

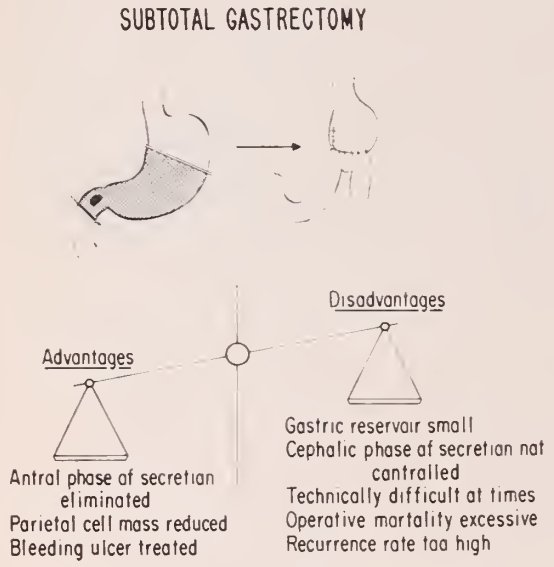


Figure 2

terostomy, it also proved to be much more effective in preventing recurrence.

It has most of the advantages of gastroenterostomy plus that of eliminating the antral phase of gastric secretion and of drastically reducing the acid-producing tissue. Also it permits control of the acutely bleeding ulcer. Its objectionable features are that the remaining gastric reservoir is so small that nutritional impairment occurs in susceptible persons; the cephalic phase of secretion is not controlled; it can be technically difficult and hazardous at times; the operative mortality rate is excessive; and the recurrence rate is too high.

Those of you who harbor the prevalent opinion that gastric resection for duodenal ulcer is being performed over the country with an operative mortality of one or two per cent and a recurrence rate of two or three per cent are in for a keen disappointment once you critically review your own clinical material or other statistics.

Kurzweg[9] emphasized this point in a talk before this society a few years ago. He indicated his awareness of the excellent results reported from some of the well-organized private clinics, but he warned that these results were usually the accomplishments of master surgeons working under ideal circumstances and with private patients. He felt that the true status of gastrectomy was much more accurately reflected in his study of the experience in three New Orleans hospitals. He found that in a ten-year period at Charity Hospital, Baptist Hospital and Touro Infirmary, 320 gastrectomies had been done for duodenal ulcer with a mortality rate of 6 per cent.

A survey sponsored by the Ohio Chapter of the American College of Surgeons by a committee under the chairmanship of Stanley Hoerr[7, 8] revealed that in 15 Ohio communities, 432 surgeons had performed over 2,000 elective gastrectomies for duodenal ulcer with a mortality rate of 5 per cent.

I suspect that the mortality of gastric resection for duodenal ulcer is and will probably remain for many years throughout the country at a level far closer to 5 than to 1 per cent; and perhaps the recurrence rate is nearer to 10 than to 2 per cent.

Many of you will recall Grimson's persuasive statement of the case for vagotomy and gastroenterostomy in his 1952 appearance before the Surgical Association of Louisiana. He continues to report

satisfaction with the operation and uses it in the usual duodenal ulcer patient.

Vagotomy combined with a drainage procedure (Figure 3) is appealing by virtue of its technical simplicity and relative safety. It eliminates the cephalic phase of secretion and leaves a normal gastric reservoir. However, it fails to abolish the antral phase of secretion. The possible use of vagotomy, suture of the bleeding ulcer, and pyloroplasty in the management of the desperately ill massive bleeder will be mentioned later. The major objection to the operation is the high recurrence rate. Although this has occasionally been reported to be as low as 2 or 3 per cent, most reports indicate a recurrence rate in the range of 10 to 15 per cent. There is no doubt that when done electively the operation is associated with a remarkably low mortality rate; but the critical reader will realize that most reports concerning the mortality rate after vagotomy and a drainage operation do not include patients with massive hemorrhage. We all know that this is the group in which operation is so risky.

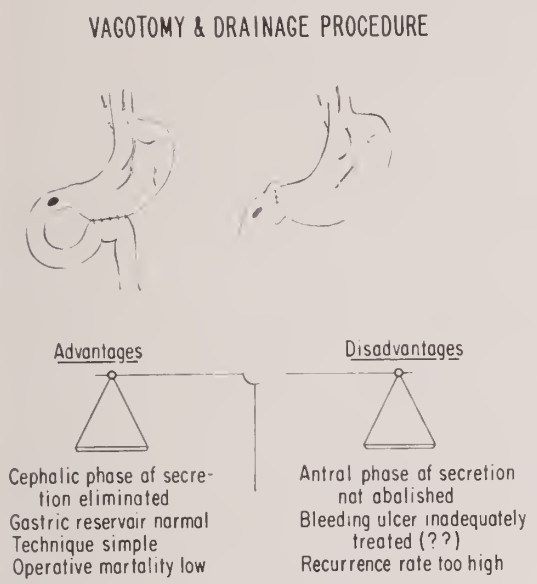


Figure 3

I believe that it is safe to say that when compared with vagotomy plus a drainage procedure the standard two-thirds gastrectomy is three times as dangerous but gives three times the protection against recurrence.

It is my impression that during the past five years an increasing number of surgeons in this country have acquired the conviction that vagotomy and limited gastric resection (Figure 4) is the operation which is most likely to fulfill the criteria for ideal surgical treatment of duodenal ulcer. The Vanderbilt University group under the leadership of Edwards, Herrington, and Scott are the most experienced and articulate advocates of this approach. Scott in 1960 before this association and Herrington[4] at a recent meeting of our State Medical Society predicted that the results of this combined operation will prove to be so satisfactory that the standard subtotal gastrectomy will become obsolete.

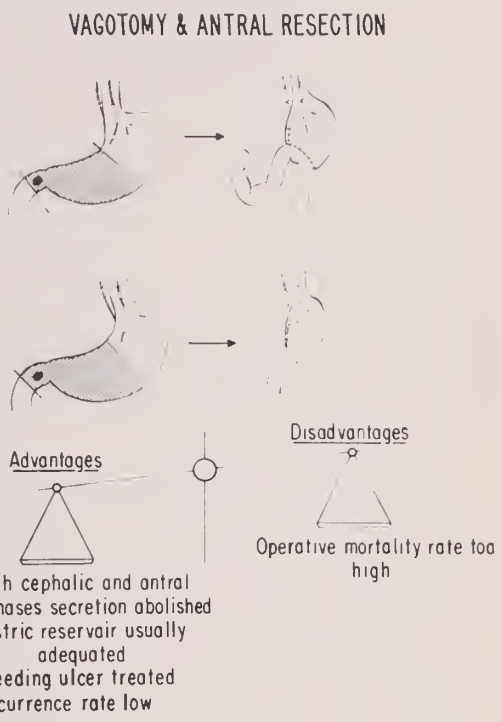


Figure 4

Both cephalic and antral phases of secretion are eliminated by this procedure with no more than a 50 per cent reduction in the gastric reservoir. However, since the duodenum must be dissected during the performance of antrectomy, the operative risk can be expected to be the same for standard gastrectomy. Its keenest pro-

ponents admit that the operative mortality is too high.

Its most appealing feature is the remarkably low recurrence rate. The Vanderbilt group has now had an experience with over 1,000 cases and thus far have seen only 5 recurrent ulcers.[5] Herrington[6] has collected from the literature an additional 2,200 cases with an even lower recurrence rate. When these two series are combined, it gives a total of over 3,000 cases of duodenal ulcer treated by vagotomy and antrectomy with a recurrence rate of less than one-half of 1 per cent.

There are those who warn, and with justification, that it is too early for us to assess the recurrence rate or sequelae of this procedure and who remind us that it took forty years to appreciate the high rate of recurrence following gastroenterostomy alone.

To this possible criticism Herrington[5] has pointed out that their follow-up exceeds 98 per cent and that over 500 of their cases have been followed for from five to fifteen years and that each of their five recurrences took place within two years after after operation.

Among the 5 patients who developed recurrences in the Vanderbilt series 3 proved at subsequent operations to have an incomplete vagotomy; and a fourth probably had an incomplete vagotomy; and the fifth patient was later found to have a malignant Zollinger-Ellison tumor. The incredibly potent ulcerogenic properties of these peculiar pancreatic tumors were beautifully described for us last year by Doctor Ellison.

As an operation for complicated duodenal ulcer, vagotomy and antrectomy would approach the ideal if the mortality rate could be greatly reduced. This can be accomplished simply by more careful patient selection or individualization.

Most of the deaths following elective resection for chronic duodenal ulcer result from rupture of the duodenal stump, pancreatitis, and injury to the bile or pancreatic ducts, all complications related to the technical management of the duodenal stump.

To insist upon gastrectomy in the presence of severe inflammation surrounding the ulcer and spreading to the adjacent pancreas and common bile duct is as unnecessary as it is dangerous. Vagotomy and gastroenterostomy is the obvious choice in this clinical setting, and it is a perfectly acceptable alternative to gastric resection when unusual difficulties are anticipated in the management of the duodenal stump. A more difficult problem in judgment is presented by the borderline case in which the choice for or against resection is much less obvious. Gastric resection can and should be carried out in most cases and the ulcer itself should be removed whenever it appears certain that it can be done without compromising the duodenal closure or without endangering the bile or pancreatic ducts; but the ulcer should be left alone when its removal appears hazardous. The evidence alleged to lend support to the view that the ulcer itself must be removed is not convincing to me.

It is recognized, of course, that an insecure closure of the scarred, inflammed, ischemic duodenal stump is not the only factor in subsequent leakage; but it appears to be the most important one.

It is admitted also that acute pancreatitis may follow operation in an area which is anatomically remote from the pancreas. However, this dangerous complication most commonly follows traumatic dissection about the head of the pancreas. Marshall,[11] reporting on 51 deaths following gastrectomy for duodenal ulcer at Lahey Clinic, emphasized that in 70 per cent of the fatal cases the ulcer involved the pancreas. Acute hemorrhagic pancreatitis was responsible for 10 per cent of the deaths, and in every case of pancreatitis the surgeon's operative note indicated that the ulcer penetrated the pancreas making dissection difficult.

Emergency Operations for Duodenal Ulcer

Hemorrhage is the most common cause of death from peptic ulcer and it is in this group that the mortality rate has been so high in the hands of most surgeons.

It has always been difficult to decide *when* operation is indicated, but until recently there has never been any serious debate as to *what* operation should be done. Gastrectomy and excision of the ulcer if at all feasible has been considered the only reliable procedure. At a recent staff meeting at Southern Baptist Hospital in New Orleans, Dr. William Syll[13] reviewed a five-year experience in that institution with 300 cases of massive hemorrhage from proven duodenal ulcer. The mortality rate for emergency gastrectomy carried out in the presence of active hemorrhage was 25 per cent. If this figure suggests to you the possibility that surgeons in that hospital do not know how to do a gastrectomy, I would remind you that during the past three years these same surgeons have done 127 elective gastrectomies for chronic duodenal ulcer with a mortality rate of less than 1 per cent.

Recently great interest has been created in Wangensteen's[14] method of gastric cooling, and if it does prove to be effective in carrying patients over an emergency period of active bleeding it will certainly reduce the number of deaths from acute massive hemorrhage.

The massively bleeding ulcer patient who has experienced a prolonged period of hypotension and visceral hypoxia is not a good candidate for two or three hours of anesthetic and operative trauma required for gastrectomy and excision of the bleeding ulcer. Surgeons would eagerly adopt a lesser procedure if they could be convinced that it could be relied upon to control the hemorrhage. The recent reports of Weinberg,[15] Farris and Smith,[3] and Dorton[2] concerning emergency direct suture of the bleeding ulcer base combined with vagotomy and pyloroplasty are encouraging. Their combined experience totals 125 cases, with a mortality rate of only 3 per cent. They are convinced that this maneuver will control the bleeding in a much safer fashion than gastrectomy and will prove to be a definitive operation as well for most of the patients. An evaluation of its immediate safety and its efficacy in preventing early postoperative bleeding will be possible only after the operation has received a much more extensive trial. In the past fifteen years I have had two deaths following emergency gastrectomy for massively bleeding duodenal ulcer, and in retrospect I believe that both of these desperately ill patients might have tolerated vagotomy, pyloroplasty and suture of the bleeding point. While I am not ready to adopt it as a routine procedure in good risk patients, I certainly intend to give it additional trial in poor risk patients whom I fear would not survive gastrectomy.

The management of perforated ulcer was ably discussed by Cerise[1] in a talk before this society in 1957. He emphasized that appropriate surgical treatment in the individual case was dependent upon many factors. I am indebted to him for these more recent data (Table 1) concerning the Tulane experience with the operative treatment of perforated peptic ulcer at Charity Hospital. One hundred eighty-seven patients were treated, 38 per cent by simple closure and 62 per cent by gastrectomy, with an overall mortality of 6 per cent. There were only 2 deaths in 115 gastrectomies. These excellent results reflect not only careful individualization of cases but also fine overall surgical care.

TABLE 1
PERFORATED PEPTIC ULCER
CHARITY HOSPITAL—TULANE SERVICE 1953-1961

Treatment	No. Cases	% Cases	Deaths	Mort. Rate %
Simple Closure	72	38	10	13.9
Gastrectomy	115	62	2	1.7
Totals	187	100	12	6.4

My personal experience with subtotal gastrectomy for duodenal ulcer has not been extensive, but it has been sufficient to have produced 4 deaths and at least 5 stomal ulcers.

In an effort to increase my percentage of future successes I have diligently searched for the reasons for past failures. Could the 4 deaths have been avoided? I have already suggested that both patients who died following emergency gastrectomy for hemorrhage were recognized preoperatively as being desperate risks, but they might

have survived a lesser procedure such as direct suture of the bleeding ulcer, pyloroplasty, and vagotomy. Of the 2 patients who failed to survive elective gastrectomy 1 apparently died of a transfusion reaction and the other succumbed about ten days after gastrectomy of perforation of a retained ulcer.

What about the 5 jejunal ulcers? In each instance the data contained in the surgeon's operative note, the pathologist's report, and the radiologist's description of the radiographic appearance of the postoperative gastric remnant suggested that two-thirds to three-fourths of the stomach had been removed. The fact that 3 of these ulcers have healed following vagotomy and the other two have apparently healed on medical treatment suggests that retained antrum or a Zollinger-Ellison tumor was not responsible for the recurrences. Perhaps the addition of vagotomy to the resection would have prevented all of the stomal ulcers.

Conclusions

In conclusion, I would emphasize that there are a number of operations that can be done for chronic duodenal ulcer. The surgeon has only to make a choice; but this choice must be made according to the circumstances of each case. For the good risk patient it seems that vagotomy plus conservative gastrectomy is the operation most likely to cure the ulcer diathesis with minimal side effects. However, if there is any real doubt in the surgeon's mind regarding the patient's general condition or the safety of the duodenal dissection, it is good judgment to resolve that doubt in favor of vagotomy and a drainage procedure.

Surgical judgment may be defined as the capacity for consistently arriving at sound surgical decisions. It is to a degree related to one's ability to estimate risks and anticipated results of operations; and this in turn requires knowledge of current statistics on morbidity and mortality based not only upon the literature but upon the surgeon's own experiences with comparable cases.[10] The surgeon can enhance his judgment by critical analysis of his own results. Optimism and enthusiasm are good, but self-delusion based upon a poor memory and a short follow-up is bad.

References

1. Cerise, E. J.: Emergency Gastrectomy for Acute Gastroduodenal Perforation. J. Louisiana State M. Soc. 110:67, 1958.

2. Dorton, H. E.: Vagotomy Pyloroplasty and Suture: Safe and Effective Remedy for Duodenal Ulcer that Bleeds; Progress Report on 100 Consecutive Cases. Ann. Surg. 153:378, 1961.

3. Farris, J. M. and Smith, G. K.: Vagotomy and Pyloroplasty: A Solution to the Management of Bleeding Duodenal Ulcer. Ann. Surg. 152:416, 1960.

4. Herrington, J. L., Jr.: A 15-Year Experience with Vagotomy and Antrectomy in the Surgical Treatment of Duodenal Ulcer. J. Louisiana State M. Soc. 114:309, 1962.

5. Herrington, J. L., Jr.: Personal communication.

6. Herrington, J. L., Jr.: Selecting the Operation for the Particular Patient in Cases of Duodenal Ulcer. Surgery. 47:497, 1960.

7. Hoerr, S. O.: Now Which Operation for Chronic Duodenal Ulcer? Postgrad. Med. 28:219, (September) 1960.

8. Hoerr, S. O.: Elective Operations Performed for Duodenal Ulcer, Their Mortality; Results of a Survey in Selected Ohio Hospitals by the Survey Committee, Ohio Chapter, American College of Surgeons, Am. J. Surg. 96:365, 1958.

9. Kurzweg, F. T.: The Mortality and Immediate Postoperative Complications of Subtotal Gastrectomy for Carcinoma and Benign Peptic Ulcer. Ann. Surg. 139:409, 1954.

10. Lanfman, H.: Some Thoughts on Surgical Judgment. Surg. Clin. N. America. 30:1171, (Oct.) 1958.

11. Marshall, S. F. and Reinstine, H. W., Jr.: An analysis of Mortality Following Gastric Surgery. Surg. Clin. N. America. (June) 1957.

12. Moynihan, B. G. A.: The Prognosis of Gastric and Duodenal Ulcer. Brit. J. Med. 1:1, 1932.

13. Syll, William: Personal communication.

14. Wangensteen, O. H., Salmon, P. A., Griffin, W. O., Jr., Peters, J. R. S., and Farouk, F.: Studies in Local Gastric Cooling as Related to Peptic Ulcer. Trans. Am. Surg. Assoc. 77:12, 1959.

15. Weinberg, J.: In Harkins, H. N. and Nyhus, L.: Surgery of the Stomach and Duodenum. Boston, 1962. Little Brown & Co.

Intestinal Perforation and Facial Fractures in an Automobile Accident Victim Wearing a Seat Belt

• An assessment of the use of seat belts raises the question of the need for shoulder harness.

DAVID WYATT AIKEN, M. D.
New Orleans

WHEN an instance of severe intra-abdominal injury caused by improper wearing of a vehicular seat belt was reported recently by Cocke and Meyer[1] the subject was deemed of sufficient importance for editorial comment.[2] Although rare, the life-threatening hazard of this type of occurrence makes it worthy of renewed consideration.

While it is not intended to disparage the proven efficacy of seat belts in preventing injury and death[3] due to automobile accidents, the time seems appropriate to question seriously whether further improvements are needed in safety apparel, such as routine use of shoulder harness to prevent facial, eye, brain, and thoracic injuries.[4]

The following somewhat unusual case report illustrates how a surgeon can be lulled into a false sense of security by erroneously assuming that a seat belt had protected the abdominal viscera. It also illustrates the type of facial injuries being encountered more commonly now that usage of seat belts is increasing. Victims with head injuries usually fatal are coming to the hospital alive instead, with disfiguring lacerations and fractures incurred on windshields and dashboards.

Report of a Case

L.N., a 25 year old previously healthy female, was in the right front seat of a car involved in a crash with another vehicle. After a nap, she had just brought her reclining seat to an upright position but had not readjusted her seat belt, which was therefore riding about two inches higher on her abdomen than normally. Soon afterward, on arrival at Vassar Brothers Hospital, Poughkeepsie, New York, this examiner observed her to be conscious, in mild shock, and bleeding from the nose, with extensive facial fractures. No other injuries were noted except for a "welt" or seat belt contusion across the lower abdomen, below the umbilicus. The abdomen was soft and not tender to palpation other than as might be expected from the seat belt contusion. Initial studies did not include a chest x-ray. Films of the face confirmed the fractures there, and a film of the pelvis disclosed no bone injury nor any abnormality of the soft tissues of the abdomen.

On the second hospital day a specialist in plastic surgery (Fred MacDowell, M. D.) reduced her facial fractures, which included a transverse fracture of the maxillae LaForte type I, bilateral maxillary sinus fractures, bilateral zygomatic fractures with depression of the right infra-orbital rim, separation of the left infra-orbital rim, and depressed fracture of the nose. He performed bilateral zygomatic suspensions, bilateral Caldwell-Luc antrostomies, and closed reduction of the nose. Dental arch bars, upper and lower, were applied to the teeth for fixation with elastic bands.

Postoperatively a great deal of nasal and pharyngeal suction, adjustment of dental wiring, and intensive bedside care were necessary. She took fluids but experienced frequent nausea and occasional vomiting. This was felt at first to be due to excessive manipulation of the pharynx with suction tubes, and to general toxicity. However, she became increasingly toxic without obvious cause. Pelvic examination on the fourth day of hospitalization revealed no abnormalities and motion of the cervix was not painful. On the sixth hospital day a bedside chest x-ray film was taken to rule out the possibility of pulmonary embolus, and the unsuspected presence of free air beneath the diaphragm was thereby revealed.

The patient was prepared for abdominal surgery. Generalized peritonitis with pelvic abscesses was found, from a single perforation of the jejunum. The perforation was located centrally in the abdominal cavity. The pelvic ab-

scesses were evacuated, the intestinal perforation was closed, and 1500 cc. of whole blood was given during the procedure. Under intensive care with heavy dosages of several antibiotics and continuous intravenous fluids and electrolytes she made satisfactory progress. The patient's wounds healed uneventfully and good bowel function was restored.

Comment

The mechanism of jejunal perforation was probably sudden compression of the intestine between, essentially, the buckle of the seat belt and the vertebral column. Were the belt fitted snugly below the level of the iliac crests, damage to a viscus should not occur, no matter how tightly the belt stretched between the two anterior superior iliac spines.

The seat belt's virtue in saving lives is nevertheless marked by failure to protect adequately against facial, eye, brain, and thoracic injuries. This patient's facial fractures are uniquely documented and were successfully treated. However, it is obvious that the medical profession must now seriously consider whether shoulder harness has become as advisable and necessary for the promotion of safety and prevention of disability and suffering as is the seat belt alone.[5]

The shoulder harness is routinely worn by military aviators and should be made available for full scale trial in vehicular traffic. The standard harness consists of two woven nylon straps originating in back of the seat. One strap passes forward over each shoulder and down to the buckle of the seat belt where the straps are attached simply.

Progress is always painfully slow, but what is only a rational possibility today should gain eager acceptance as a safety requisite in a few years, particularly if supported by members of the medical profession.

Summary

Certain accident hazards not adequately avoided by use of seat belts in automobiles are discussed, with report of an unusual case combining facial fractures with perforation of the small intestine. Advocacy of full scale trial of shoulder harness in the field of human engineering for traffic safety is urged on the members of the medical profession.

References

1. Coeke, W. M. Jr., and Meyer, K. K.: Splenic rupture due to improper placement of automobile safety belt, J.A.M.A., 183:693 (Feb. 23) 1963.
2. Editorial, pp. 684, Idem.
3. Frazier, R. G.: Effectiveness of seat belts in preventing motor vehicle injuries, New England J. M., 264:1254 (June 15) 1961.
4. Kemmerer, W. T., Eckert, W. G., Gathright, J. B., Reemtsma, K., and Creech, O., Jr.: Patterns of thoracic injuries in fatal traffic accidents. J. Trauma, 1:595 (Nov.) 1961.
5. Quinn, F. B. Jr.: Are Seat Belts Enough? P. G. 26:101 (Dec.) 1962.

What is Drug Safety?

Safety is a relative thing it can never be black or white. A drug which would be considered incredibly dangerous as a substitute for aspirin might well be useful in the treatment of a life-threatening disease. Furthermore, safety can only be judged in the light of current scientific information. As a consequence, a drug properly released as safe for use may later be made even safer by a technical advance. The World War II penicillin was made by production methods that today seem crude, but it saved countless lives.—John T. Conner, President, Merck & Co., to American Hospital Association, Sept. 18, 1962.

Respiratory Diseases: A Community Problem*

• The control of respiratory disease holds the promise of a longer and more useful life. This will only be accomplished when the general citizenry, the medical profession, the health department, and the tuberculosis association each play a specific and precise role.

SYDNEY JACOBS, M. D.†
New Orleans

MAN could probably live longer if he could breathe better. The span of life has been greatly increased, but this gain has been spotty and not uniform. While many citizens are living longer (and suffering more), many others are not able to reach this increased span of life simply because they do not have the ability to oxygenate their lungs and rid themselves of carbon dioxide. To a great extent this has come about because so many persons are affected by one or more of the clinical entities collectively designated as "Respiratory Disease", some of which can be cured, many of which can be relieved, and the majority of which can be prevented.

The list of conditions causing disorders of the breathing apparatus is long and includes those caused by living organisms (viruses, bacteria, fungi), by allergens and by air pollutants. Irrespective of the original etiology, the respiratory disease may subsequently evolve into asthma, bronchiectasis, chronic bronchitis, pneumonoconiosis, pulmonary emphysema, pulmonary fibrosis, pulmonary hypertension, and related cardio-pulmonary complications. At some stage of its evolution, each one of these conditions is evidenced by cough, expectoration, shortness of breath and wheezing.

There is an observable association of noncontagious respiratory diseases and tuberculosis, i.e. the more tuberculosis we find, the more cases we uncover of noncontagious respiratory disease. Conversely, if an RD campaign is successful in motivating persons with chronic cough and shortness of breath to see their physicians, unquestionably many previously unrecognized instances of tuberculosis will come to light. See Figure 1 and 2.

If respiratory diseases are ever to be adequately curbed, an intense co-ordinated effort will be needed. This is the sort of unified action only a community can bring about, and direction is needed for it to be worthwhile. In 1963, the National Tuberculosis Association will launch an RD Campaign with the objectives of alerting to the dangers of chronic cough and shortness of breath and of encouraging all persons who have these symptoms to see their physicians. It will also engage in medical professional education and will solicit the co-operation of doctors and laity in the program of expanding the functions of the tuberculosis associations beyond tuberculosis into the field of nontuberculous respiratory disease.

Why Should the Community be Concerned About Respiratory Disease?

The American Community is a unique sociological phenomenon and maintains an intense interest in its health. Probably nowhere else on the face of the earth do citizens band together so much for the common good, particularly if that common

* Presented at the Seventh Annual Southwest Regional Conference of the Iberia Parish Tuberculosis Association, New Iberia, Louisiana, November 8, 1962.

† From the Department of Medicine, the Tulane University School of Medicine, New Orleans, Louisiana.

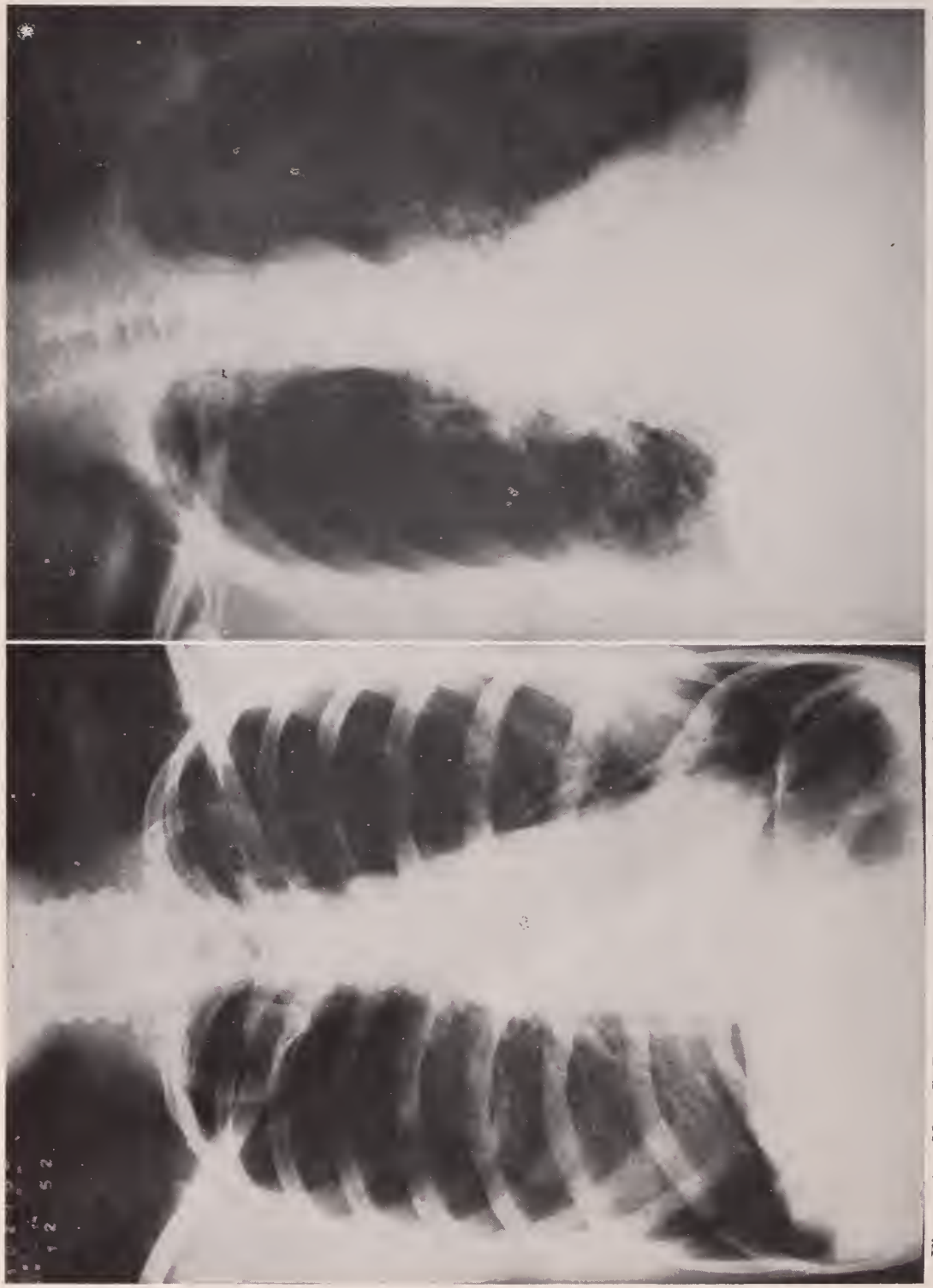


Figure 1.—Mrs. G. R., age 23 years, was being treated for pulmonary tuberculosis. When all the family contacts were examined, her mother, Mrs. G. B., age 56 years, was found to have bilateral bronchiectasis.

good is the improvement of the physical health of all its component citizens. In an effort such as one projected for 1963, the public will learn something of the importance of cough and dyspnea and will recognize that the Tuberculosis Associations are engaged in an all-out effort against all respiratory diseases.

The need to do something is indicated by the enormity of the problem. During



Figure 2.—Mrs. E.R.K., age 72 years, had been treated for "chronic bronchitis" complicating osteoporosis many years until someone examined the sputum and found acid-fast bacilli therein.

the winter, one million people are absent from work each year because of respiratory diseases. These diseases are important not only because of the number of attacks each year, but also because they can trigger more important and serious states of ill health or even fatality. The epidemic of Asian Influenza of 1957-58 brought home the observations that death rates in general rise during each wave of influenza. In a period of 6 months, there were 59,000 more deaths than would otherwise have been expected. Inasmuch as 36,000 of these occurred among persons over the age of 65 and there were 50,000 deaths from pneumonia, influenza, cardiovascular or renal disease, the startling toll—direct and indirect — of respiratory diseases is evident.

It is generally expected that the average American citizen will in some way participate in the affairs of the community and will spend a considerable amount of time in uncompensated endeavor. In the Quarterly Review of the International Union Against Tuberculosis, Sol Lifson has a contribution entitled, "Volunteers Assist with Health Education of the Public". He tells of an experiment in the state of Kentucky and of a second in Iowa where volunteers were used to conduct a health education program with good effect. Professional leadership and guidance made it possible for these previously inexperienced persons to function effectively in disseminating health education.

It is recognized that man has great ability to harm himself and does so spectacularly by putting into the outdoor air quite a large variety of substances which he would do well not to inhale. These substances, commonly called air pollutants, are the gases, vapors, dusts, and fumes we have to breathe because they are the waste products of our modern civilization. The problems of air pollution are so many and so complex that no community is spared. It is of interest that in calling the National Conference on Air Pollution for Washington, D. C., the Surgeon General of the United States Public Health Service has asked for broad participation from all segments of the community and has specifically thrown the conference open to the general public.

Certain specifically organized segments of the community are particularly involved in this effort. The medical profession has its own field of responsibilities, the official health agency is an active partner while the voluntary health agency has a most important role.

The Medical Profession

Undoubtedly, many persons will ask, "If this is a matter of diseases of the respiratory tract, shouldn't the doctors handle this themselves?" The answer to this is obviously "No". Many of these conditions occur from causes and factors which no individual physician or group of physicians could influence. Although physicians have advised countless thousands of persons to stop smoking cigarettes, it is

quite evident that pressures of our culture keep this prescription from being filled. No single doctor could conduct a campaign to persuade people to be innoculated against Asian Influenza, although he could administer the vaccine to those who consult him. The problems of air pollution and of air-borne infection are also beyond the reach of any physician or of any medical society.

There is a field, a well-defined one, for the medical profession. It is that of putting its enlightened influence into this campaign. People have come to expect and to receive the best in leadership and direction from their personal attending physicians. Physicians can and will play a tremendous role in interpreting to their patients how respiratory diseases arise and what to do about them. No matter how broad or how specialized in medical interests, most physicians will be able to participate in the community effort and to help achieve the common goal. When the general public has been alerted to the two symptoms of cough and shortness of breath, some people will do something about it, some will be too frightened to act in their own best interests, while some will be completely apathetic. Irrespective of the personal reaction to the concerted stream of publicity, the personal attending physician will be the one person whose advice will be solicited and followed.

Considerable support can be provided physicians by *Clinical Notes* and *TB Abstracts* both of which are made possible by the Xmas Seal Sale. Each physician who receives these two excellent and concise publications will understand much better how he can convey this intelligence to his patients. There is now in preparation a pamphlet entitled "Chronic Cough or Shortness of Breath" a practical guide to be distributed to all practicing physicians in the United States. This booklet will place at the disposal of the physician briefly and practically all he needs to know when confronted by someone with the two symptoms of cough and shortness of breath.

The Official Health Agency

It is the function of the official health agency to protect the health of the community. We in Louisiana are proud of the fact that ours was the first State Board of Health in the country sensitive to this concept. Originally, this function was to prevent communicable disease, but more recently there has been expansion into other areas. Official agencies are directed by law or official regulation to control and eradicate tuberculosis and other communicable diseases as a basic function. The growing list of respiratory tract diseases which can be prevented by proper immunizations throws light on the need for intensive public health work in promoting campaigns for the administration of such immunization materials, and this is a legitimate function of the health department. There is reason to believe that if such acute communicable diseases can be prevented, many of the presumably noncommunicable respiratory diseases of later life can similarly be prevented. Although health departments do not ordinarily deal with physicians in private practice, medical societies, medical schools or hospitals, they can effectively help in this campaign by expanding present regional tuberculosis clinics into chest clinics. While pressing constantly for measures to reduce the volume of communicable disease, health departments will in effect also be lessening the impact of noncommunicable disease.

The Voluntary Health Agency

The voluntary health agency—in this instance the tuberculosis association—has perhaps the biggest job to assume. It must mobilize public opinion, and it must co-ordinate the activities of all the other segments of the organic community. First of all it must remind everyone that tuberculosis has not yet been eradicated and that while we struggle to control other respiratory diseases, we cannot actually succeed until we have eradicated tuberculosis. The eradication of tuberculosis will call for tremendous shifts in resources within the tuberculosis community pro-

grams. In relation to many of the aspects of the problems of noncommunicable respiratory diseases, TB associations will deal with practitioners of medicine, hospitals, medical schools, medical societies and with the general public more than will the official agencies. Expansion into other fields is essential to the ultimate accomplishment of tuberculosis eradication because it will assure the continuation of the voluntary tuberculosis movement until this objective can be realized. Volunteer groups will have to be stimulated to the challenging tasks of supporting the campaigns in immunization (Asian Influenza, diphtheria, whooping cough, the newer "cold vaccines" as these become available) in mobilizing against air pollution while never relenting in pressing for the eradication of tuberculosis. Official health agencies must be constantly encouraged not to relax efforts to eradicate communicable disease.

Co-operation with the medical profession will be essential at all levels. Professional education must be supported through the medical schools, through local hospitals, through the Academies of General Practice and through the dissemination of professional literature to individual practicing physicians in each community. The medical division, the Thoracic Society, has the opportunity of constantly presenting the latest medical point of view to the medical profession in all its aspects.

Summary

The control of respiratory disease ("RD") cannot be accomplished by any single agency or any single group; it can be accomplished only when all the forces within a community are brought into action. The general citizenry, the medical profession, the health department and the tuberculosis association must each play a specific and precise role. It will be the responsibility of the tuberculosis association to act as a stimulating and co-ordinating force. There now exists the possibility of increasing the span of useful, healthful life to a degree never previously envisioned. This possibility can be converted into a probability when all the various forces in a given geographical area band together to act upon respiratory disease as a community problem.

Clinical Trials of New Drugs

We find many references to "human guinea pigs", surely one of the most frightening and degrading terms ever invented. Generally, the term refers to the first use, in the hands of a highly competent doctor, of a compound which had been studied extensively in animals and which had shown promise of being useful as an agent in humans. This should be noted: the physician himself—acting with complete independence—decides whether he will participate in the evaluation of a new compound. And then he makes his own professional judgments as to its usefulness and effectiveness. In other words, while clinical trials are necessary to industry, they are not a process controlled by industry.—John T. Connor, President, Merck & Co., to American Hospital Association, Sept. 18, 1962.

Doctor C. C. Bass Replies to Doctor Rowe

I suggest that anyone who wishes to evaluate Dr. Rowe's criticism of my paper (Personal Oral Hygiene, A Serious Deficiency in Dental Education, J. Louisiana State Medical Society, 114:370, 1962) should also read the original paper. Expressions quoted out of context and discussion of misinterpreted statements are sometimes misleading.

Doctor Rowe says that the opening paragraph in my paper is simply not true. I say that it simply *is* true and repeat what I said in my third paragraph relative to the statements in the first and second paragraphs: "I am prepared to substantiate them to the entire satisfaction of any competent person who is willing to make the necessary investigation".

Most of Doctor Rowe's paper refers to subjects entirely unrelated to the specific subject and content of my paper. My paper does not state or imply any deficiency in dental education and research in these different categories. The original paper, if carefully read, is sufficient reply to any of his criticism that is applicable to its contents.

Doctor Rowe's comment relating to proper oral hygiene, that it *"absolutely does not entirely prevent either caries or periodontitis as stated by Doctor Bass"* refers to the fourth paragraph of my paper which should be read in this connection. I quote two sentences of it: "More important, at the moment they do not know that further disease and damage therefrom can be, *for all practical purposes,* entirely prevented in the future. The dentist does not know this either."

Doctor Rowe says caries is very uncommon in India, for instance. The fact is that the native populations of a large part of the entire world have little or no caries. Incidentally this is not related to fluorides in the water.

Periodontoclasia ("pyorrhoea"), on the other hand, is a universal disease of man, originating in childhood and never ending as long as any teeth remain. Doctor Rowe cannot find one middle aged or older person who does not now have demonstrable, active (and therefore advancing) periodontoclasia lesions about most or all of his or her teeth. This disease cannot be prevented or further advancement prevented by any means now known, or likely ever to be known, without the specific method of personal oral hygiene referred to in my paper.

A teacher of dental pathology (Doctor Rowe is Chairman, Division of General and Oral Pathology, Washington University School of Dentistry) who does not know the prevalence of, or the microscopic local etiological conditions in, these diseases would hardly know or teach the personal oral hygiene necessary for their prevention and control. It is just this deficiency in dental education to which I was trying to call attention. This deficiency is likely to continue as long as those in the highest positions of responsibility and control are so confused, with their abundance of information, until they are unable or unwilling to get down and learn the simple facts as to the local cause of these diseases and what is necessary and effective for their prevention and control. Effective personal oral hygiene is indeed a serious deficiency in dental education.

Geriatric Program in a Mental Hospital: An Experiment*

• The solution of a problem in management, at the Central Louisiana State Hospital.

D. B. BARBER, M. D.
Alexandria

THE emphasis now being placed upon the problems of the Aging, and the role of the physician, particularly that of the general practitioner, it appears fitting to report upon the work being done at Central Louisiana State Hospital with a group of its geriatric patients. With the new concept in treating the mentally ill, the Milieu Therapy, which embraces the entire environment, physicians, psychologists, nurses, aides, social workers, many ancillary services of various therapeutic workers, electroshock therapy and drugs, with all serving as a "team", the hospital has ceased to be the asylum for the incarceration of the mentally ill and is now a dynamic hospital geared to the active, intensive treatment of these patients. Whereas, formerly, every effort was made to keep the patient quiet and contented, now the goal is to remotivate and rehabilitate him and return him to the community as a productive citizen.

Origin of Program

During this evolution, the hospital found itself with approximately 1000 persons, well institutionalized, quiet, most with long residency, over 60 years of age, in remission of their former mental illness. They did not fit into the intensive therapy program, and their major disability being that they were old and had been in the hospital for a long time. Many could readjust in the protective environment of their families, yet were not able to be returned for one of four reasons:

First: There was no family to return to;

Second: The fear of the patient to leave the protective environment of the hospital and reenter into the stresses that caused the admission;

Third: The reluctance of the family and community to accept again a person with the stigma of having been in a mental hospital; and,

Fourth: Some families "could not be bothered with an old relative".

The hospital had little to offer these patients in the intensive therapy regime, and they were largely neglected. The psychiatrists were too involved with the acutely ill to spend valuable time with one in remission. Actually, this group did not belong in the hospital, yet the hospital could not afford, because of ethical and moral considerations, to discharge them onto the community to shift for themselves in the competitive society of today. Being "stuck" with them, the question arose "what are we to do with them?"

The answer seems to be the establishment of a Geriatric Unit, united with the hospital administratively, yet for all practical purposes, a separate and distinct entity. The hospital had acquired from the Federal Government, a housing project, called Forest Glen, located adjacent to the campus. This was being rented to the general public. One of these units was completely renovated, with new furniture, etc., bright colors, small divisions for sleeping, with ample meeting rooms for recreation, and a dining room, all in a beautiful setting, as the first step in a program for several hundred geriatric patients.

The writer retired from private practice after thirty-five years, and became the

* Presented at the Eighty-second Annual Meeting of the Louisiana State Medical Society, May 8, 1962, Monroe.

Director of the Geriatric Program, with a free hand in its development. Due to monetary limitations, and the experimental nature of the move, one building, to house 72 patients, was converted.

On July 7, 1961, 35 white females were moved from Ward 22 to Unit 6, the designation given for administrative purposes. Within a few days, another 35 joined them. The ages were from sixty to eighty years with residency of ten to forty years in the hospital. Some had lived on Ward 22 for fifteen to twenty years without moving, and many had not been outside the grounds since being admitted. They had an occasional letter, a rare visitor, attended religious services, went to an occasional hospital dance, arose when the whistle blew, ate on schedule, and went to bed on schedule. They gave little or no trouble, were doctored when ill, and were chiefly occupied in rocking in their "own" rocking chair—reconciled to this life of supervised inaction "from now on". They were not asked to go to Unit 6—they were told to pack their belongings and be carried there. Of course, many grumbled about being uprooted.

The newness of the surroundings, with new furniture, bright colors everywhere, appealed to many. An intensive period of activity awaited them, and completely altered their lives—with remarkable, far reaching consequences for them, and for many persons on the outside.

The objective was to make life as near that of normal persons as was possible in an institution, using several approaches, namely, work, recreation, bringing the community to Unit 6, taking Unit 6 to the community, and lastly, bringing the patient and family together again.

Work

At first, only housekeeping chores on the Unit were attempted. Serving the meals, and cleaning up afterwards, keeping the floors and walls clean, washing their own clothes and bed linens, were undertaken. Jobs within the hospital, such as working in the sewing room, the upholstering shop, the kitchen and cafeterias, the greenhouse, clerical work in various departments, were undertaken. Later, part-time work in the homes of the Hospital Staff provided work for others. These jobs were to prove to them that they were capable of performing useful functions with and for others, and cause them to regain their self-respect, as well as to improve both their mental and physical health.

Recreation

Recreation consisted of returning to the hospital for dances, shows, etc., and organized religious activities.

In addition, 3 Garden Clubs from Alexandria, Pineville and Chandler Park, came to Unit 6, helped them dig garden plots, plant and cultivate flowers and vegetables and to make floral arrangements for the beautification of their rooms and recreational areas. The warm personal contacts with these ladies had wonderful effects upon the patients. The Pilot Club came once a month, in the evenings, soon to be followed by the Epsilon Sigma Alpha Sorority, that came twice a month. The Jewish Womens Council came once a month, with a cake and birthday gifts for each that has a birthday during the month. Five (5) Future Nurses Clubs alternated in coming on Saturdays, to play the piano, sing, play games, read to and write letters for those that cannot write. High Y Teams, high school girls under the sponsorship of the YWCA, came frequently in the afternoons, after school, bringing youth and cheer to the elderly.

Bringing the Community to Unit 6

Soon after moving to Forest Glen, the neighbors were visited and asked to "drop in and visit Unit 6". A few did so, and soon it was the thing to do to visit, and drink coffee, even bring the children to visit the "ladies" of Unit 6. It was the neighbors that led us to cease calling them "patients" and to use the term "ladies" instead. These visits, unexpected and unscheduled, caused the ladies to take more concern with their dress and general appearance. This led to the establishing

of their own "beauty shop", with patients learning to dress hair, apply makeup and the like, to other patients, under the supervision of a competent beauty operator employed by the hospital. A sewing machine was brought, and many began to sew again, making their own clothes, in several instances. Families were written, asking for "dress up" clothes and shoes to wear to the parties. Visiting hours were extended until 9 P.M. instead of the 4 P.M. limit within the hospital proper, with no limit as to how late one wished to stay up at night in the recreational rooms. A Methodist Church group holds Sunday School each Sunday morning for the Protestants, and Mass is celebrated for the Catholics by a priest every Saturday. Attendance is practically 100 per cent by each group, on strictly a voluntary basis. Many other groups, too numerous to mention, but not regularly scheduled, have participated in the cultural and social life of the Unit.

Taking the Patient to the Community

The first effort to take the ladies to events, away from the hospital, was made by neighbors taking them to church with them. Care was taken that only the "better" ladies were permitted to go at first, but their behavior led to permitting increased numbers to attend services. A picnic was held at the City Park for the entire group, and for many, this was the first time for them to leave the hospital since their admission. A Lions Club Rodeo furnished tickets and a group attended. The Shrine Circus came to town later, and a large number attended the circus. Then, the Rapides Parish Fair opened, and 50 patients were taken to the Fair, with only one attendant. No one misbehaved or got lost from 9 A.M. until 3 P.M. This encouraged the granting of more privileges, such as going shopping in town, unescorted, but in pairs. A capable lady may be entrusted to take a more dependent one to town. They go to football games, concerts, art exhibits, and the like, according to their cultural background.

The Service Club rendered a great service by coming to the Unit and taking 12 to 15 ladies at a time to the home of one of the members. They would have coffee parties and impromptu entertainment for them, music, card games, and the like, topped off with a picture show, or a tour of the Park or visit a super market, all without supervision of hospital personnel. The ladies met persons not connected with the hospital, in a social setting, as they would at their own home. The members of the Service League soon were able to accept the ladies as persons of individual worth and merit, and it has made a great inroad in breaking the barriers that exist between the Community and the Hospital.

Bringing the Patient and Family Together

The great change in the demeanor, the improved personal appearance, the improved mental and physical health, brought about increased efforts to get the ladies back with their families, in their own community. They were encouraged to write letters to relatives and friends, asking that they visit them on Unit 6, and were told that they lived outside the Hospital and "did not have to come through the gate" to visit them. These letters were reinforced by letters from the Director, urging them to visit. If the nearest of kin could not visit, more distant ones were written to. There were many visits made out of curiosity, to be followed by more of genuine interest. One patient had her first visitor, after thirty-five years in the hospital. Soon relatives were taking them out to dinner, then for a weekend, then for a week or so. As a consequence, 133 weekend passes, 45 seven to fourteen day passes, have been issued. But the great payoff has been the granting of 15 Convalescent Leaves—and indefinite parole up to twelve months, and after twelve months adjustment at home, a complete discharge is given. An additional 7 patients are now ready for Convalescent Leave, but the cooperation of the family has not been secured. Two are now in foster homes, being neither a guest nor a servant, but a useful member of the family unit.

As these leave, others take their place,

with the ultimate goal being either return to their families or placement in a foster home.

Would that time permitted relating some of the personal interest stories that occurred. One must suffice. After returning from a Service League party, with stars in her eyes, she said: "I had a wonderful time. She was so gracious to us. Her linens and glassware were beautiful. I had forgotten that living could be like that."

Results

The success of Unit 6 has been greater than our expectations. The Legislature has approved the experiment by granting $500,000 for its extension and by early 1963, we expect to have 500 to 600 more, both male and female, white and colored, participating in the Geriatric Program of Central Louisiana State Hospital.

Acknowledgement must be made to the many members of the volunteer groups, without whose help the program could not have been so rewarding.

Shelter, food, clothing, and medical care is not enough in any Geriatric Program. Instead, a dynamic approach must be made, using all available resources, plus inventiveness in securing from the community such other resources that so often are looking and asking for an opportunity to lend themselves, only for the asking.

One of the tangible results seen is the decrease in the use of medicine to less than one-third the amount under a "static regime". Gain in weight and improvement in general appearance, caused by the increased activity, led to better appetites. More visitors led to better grooming and care of their person. Less supervisory personnel is required, thus decreasing the cost of maintenance. The work done by the patients themselves also led to lower maintenance cost to the hospital.

Behavior problems have been reduced to practically none. They are too occupied with their work, recreational, religious and social activities to have time to get into trouble. There are less frustrations—instead of being told "not to do this or that", they are encouraged to engage in creative work. As an example, the Cancer Society had difficulty in getting bandages and dressings cut, folded and wrapped for the indigent victims of cancer. The ladies on Unit 6 gladly undertook the job, to the complete satisfaction of both the Cancer Society and the ladies of Unit 6. By their work, they feel that they repay, in some measure, what the community has done for them.

Conclusions and Personal Impressions

1. Age is relative. No person is without some residual talent. These talents must be explored and exploited for the person's benefit.
2. Recognition of an individual's worth must be accorded him.
3. Constructive work creates self respect in the individual and esteem of his contemporaries.
4. A mental hospital should not be the reward for a lifetime service to the community.
5. The geriatric patient should continue to be a citizen, contributing to the community according to his ability.
6. For those unable to care for themselves, it is the duty of the community (State, Parish, Ward, City or Town) to support and provide for them, and not the Federal Government.
7. That Church and Fraternal organizations should seriously consider establishing Geriatric Centers for their own elderly geriatric persons.
8. That small Nursing Homes cannot provide an adequate program for the active elderly person.
9. That a minimum population of 100 geriatric persons is necessary to provide a rounded program — without adequate population, the overhead would be prohibitive.

The Journal of the Louisiana State Medical Society

Established 1844

Published by The Journal of the Louisiana State Medical Society, Inc. under the jurisdiction of the following named Journal Committee:

George H. Hauser, M. D., Ex-Officio
J. E. Knighton, M. D., Chairman
Sam Hobson, M. D., Secretary
H. H. Hardy, Jr., M. D.
M. D. Paine, Jr., M. D.

EDITORIAL STAFF

PHILIP H. JONES, M. D., Editor

COLLABORATORS—COUNCILORS

Nicholas J. Chetta, M. D.
J. E. Clayton, M. D.
Guy R. Jones, M. D.
C. E. Boyd, M. D.
Frederick A. Marx, M. D.
John L. Beven, M. D.
J. Y. Garber, M. D.
R. E. C. Miller, M. D.

C. GRENES COLE, M. D., General Manager
1430 Tulane Avenue

Subscription Terms: $4.00 per year in advance, postage paid, for the United States; $5.00 per year for all foreign countries belonging to the Postal Union.

News material for publication should be received not later than the eighteenth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

Manuscripts should be addressed to the Editor, 1430 Tulane Ave., New Orleans, La.
The Journal does not hold itself responsible for statements made by any contributor.

Editorial

High Altitude Pulmonary Edema

Symptoms of considerable discomfort are known to develop in individuals rapidly transported to altitudes over 10,000 feet above sea level. These have been designated as acute altitude sickness, mountain sickness or **Soroche.** Within a few days, physiological adjustments occur and when this is accomplished the uncomfortable symptoms disappear. In some situations, however, discomforts are progressive, acute pulmonary edema develops and a condition of serious illness is manifest. This occurence is less well known than the transitory manifestations.

A recent review and report of cases under the title "High Altitude Pulmonary Edema" by Hultgren et al[1] is a valuable and informative article on this subject.

In this day of rapid transit, travel between sea coasts and mountains, mountain climbing, exploring and rescue missions, the knowledge of high altitude pulmonary edema with regard to its recognition, management, and possible prevention is important to many individuals. The article covers the paucity of published data, reviews two series of case reports and adds 15. A total of 41 were reviewed and analyzed. These cover the period 1950 to 1959. The authors were of the impression that rapid exposure to high altitude appears to be a necessary factor. Most of the patients in this series have been thoroughly acclimatized and developed high altitude pulmonary edema not on their initial exposure to high altitude but after returning from a stay at sea level. Only one of the 41 patients had not recently been to a lower altitude prior to the illness. The mean time spent at lower elevation for all 41 cases was 12.1 days. The range was 5 to 21 except with one patient who had a stay of five months at a lower altitude.

The altitude at which pulmonary edema occurred varied from 12,225 feet (Oroya) to 15,300 feet (San Cristobal). The young male is likely to be the most frequent victim of high altitude pulmonary edema. Fifteen of the 41 patients were less than 10 years old. Four patients experienced second attacks and one each experienced three and four attacks.

There may be an inherited susceptibility. There were three sisters and two brothers. A latent period of from twelve to thirty-six hours was present between the time of return to the area of high altitude and the appearance of symptoms and signs of pulmonary edema. The first symptoms were fatigue and weakness then increasing dyspnea and dry cough. Later in several patients the cough was productive of clear pink-tinged or bloody sputum. Four patients had nausea and vomiting. Symptoms of acute upper respiratory infection were recorded in only 2 patients. Physical signs were heart rate 70 to 160 with a mean of 122/minute. Blood pressure 78 to 142 systolic with a mean of 106 and 30 to 100 diastolic with a mean of 69. Respiratory rate was elevated 20-54/minute. Range of temperature was 97-100.5° F. with a mean of 98.8°.

The authors note that there was no clinical evidence of heart failure. There was, however, cyanosis of the lips and extremities in some cases marked. Crepitant rales were present in the chest. All patients were studied at the Chulec General Hospital which is located near La Oroya, Peru, at an altitude of 12,225 feet. Fever was not a constant finding. When present it dropped after the institution of therapy. Hemoglobin varied between 12.7 and 18.7 grams (mean 15.5). The hematocrit varied from 40 to 54 per cent with a mean of 50 per cent. These values are lower than the figures accepted and obtained by other investigators and by the authors in normal residents at La Oroya. Such figures are 16.4 - 22.1 grams for hemoglobin and 40-84 with a mean of 57.6 for the packed cell volume. The hemoglobin and hematocrit of the patients therefore was significantly lower than that of the normal residents. The inference was that the patients had experienced a drop in their red cell volumes during their stay at sea level to normal sea level values.

Adequate serial electrocardiograms were available from the study of 10 patients. Changes noted on recovery were a decrease in heart rate in 7 cases, lowering of the P waves in 7 cases. Initially the P waves in leads 2 and V2 were pointed and up to 3.5 mm. high. A decrease in the degree of right ventricular hypertrophy or "strain" was indicated in the electrocardiograms of 2 patients.

Roentgenograms of the chest during the acute stage and following recovery were available in all of the 22 episodes of acute pulmonary edema experienced by the 15 patients in this study. Typically the picture would demonstrate bilateral, patchy pulmonary densities with fullness of the central pulmonary vessels and frequent enlargement of the main pulmonary artery. Radiotranslucent areas of lung were noted between areas of density. Acute pulmonary edema occurred in the absence of significant overall cardiac enlargement and no consistent changes in heart size accompanied recovery. The central pulmonary vessels in 17 of the 22 episodes decreased in size after recovery from the pulmonary edema. In 9 patients prominence of the main pulmonary artery decreased on recovery.

Treatment consisted of bed rest, continuous oxygen by mask or tent and usually penicillin daily for three days. Digitalis was without apparent benefit when administered to 2 patients. Improvement was rapid and duration of hospital stay varied from one to seven days with a mean of 3.1. There were 2 deaths among the 41 patients but none in the 15 reported by the authors.

The authors note that there are few signs of cardiac failure aside from the pulmonary edema itself. They consider the possibility of increased capillary permeability caused by the anoxia but do not regard this as an important factor in the syndrome. They consider the elevated pulmonary capillary pressure is important and after reviewing the evidence note four circumstances that would contribute to this end. Prominent among these is redistribution of the blood from the systemic to the pulmonary circulation. Also of importance are changes in total blood volume as induced by high altitude and descent to lower elevations. Of further effect is the constriction of pulmonary veins

or venules for which there is clinical and experimental evidence. They feel that acute left ventricular failure is the most likely cause of the syndrome. The authors are emphatic that this syndrome is not pneumonia and note that the course of the disease has not been altered by any antibiotics.

The treatment of the established condition is rapid removal of the patient to a lower elevation and to a hospital. There the patient should receive absolute bed rest and continuous oxygen by tent or mask. In the absence of such facilities oxygen should be administered when and where the pulmonary condition develops and persons above 15,000 feet should have available emergency oxygen sufficient to supply the minimum of four liters per minute for several days.

By way of prevention it is advised that mountain climbers should be made aware of the possibility that this serious condition may develop. It should be recognized that susceptible subjects are those who have experienced previous attacks or who are acclimatized persons who are returning to the mountains after a stay in a lower elevation. Adequate time should be taken in a gradual ascent to permit full acclimatization. It is clear that high altitude pulmonary edema is a possibility among those who frequent such areas. Its recognition is a signal for aggressive therapy.

1. Hultgren, Herbert N. et al: High Altitude Pulmonary Edema, Medicine, 40:289 (Sept. 1961).

2. Hultgren, Herbert N. and Lungberg, Einar: Medical Problems of High Altitude, Mod. Concepts of Cardiovasc. Dis., Vol. 31, No. 4 (April 1962).

ORGANIZATION SECTION

The Executive Committee dedicates this section to the members of the Louisiana State Medical Society, feeling that a proper discussion of salient issues will contribute to the understanding and fortification of our Society.

An informed profession should be a wise one.

RESOLUTIONS

The following resolutions, adopted by the House of Delegates at the 1963 Annual Meeting, are printed herewith for information of the members of the Society in accordance with instructions of the House.

Re: Government Employment Services
Presented by Calcasieu Parish Medical Society

1. WHEREAS, the present socialistic trend in government is slowly destroying our preferred capitalistic system, and, specifically, public money is being used to advertise government placement service, and solicit trained, medical personnel, among various applicants, for transfer to other jobs, thus causing labor turnover and additional employee training expense to employers, and

2. WHEREAS, historically, the Government Employment Services have not increased the number of available professionally trained personnel, but have increased the costs involved in their placements and in this way secured additional budget funds to be squandered by the United States Employment Service, and

3. WHEREAS, the original sole purpose and function of the United States Employment Service and its affiliated state employment agencies was to assist unemployed persons to secure employment, to bring about discontinuance, in most instances, of withdrawal of unemployment compensation payments to these people,

4. BE IT RESOLVED, that the Louisiana State Medical Society go on record as opposing this governmental action as one unnecessary, unjust, and in direct competition with private enterprise, which has been serving this function adequately at no expense to the taxpayers for decades. Be it further resolved that the Medical Profession will continue their use of such ethical agencies as the Registry for Nurses, Registry for Laboratory and X-Ray Technicians, and reputable private employment agencies, etc., for selection of personnel, and that this resolution will be widely disseminated to persons potentially affected by it.

Re: Unsupervised Laboratories
Presented by Orleans Parish Medical Society

WHEREAS, attention has been called to the fact that clinical pathology laboratories are operating in the State of Louisiana, which laboratories are not properly supervised by a qualified, licensed physician; and,

WHEREAS, the practice of billing patients for such services through the doctor's office as though the work had been performed by the doctor or a member of his staff, is both unethical and dishonest; therefore be it,

RESOLVED, that all members of the Louisiana State Medical Society be reminded that it is unethical to send laboratory work including blood, urine, tissues, etc., to laboratories which operate without proper medical supervision; and be it further,

RESOLVED, that when it has been determined by a proper committee of this Society that one of its members is guilty of such practice, appropriate action, including suspension or expulsion from the Society will be undertaken; and be it further,

RESOLVED, that where suspension or expulsion is found necessary, the matter will be referred to the Louisiana State Board of Medical Examiners.

Re: Health Insurance
Presented by Calcasieu Parish Medical Society

1. WHEREAS, there is a steady increase in the cost of health insurance.

2. WHEREAS, a pattern of usage of health insurance benefits characterized by "over-utilization", such as admission to hospitals for diagnostic tests only; readiness to be hospitalized for minor surgical procedures that could be done as well on an out-patient basis; remaining in hospitals unnecessarily; readiness to go on sick leave and to extend the stay on sick leave from the job on the slightest indication, and similar practices which increase the amount of benefits paid out, has increased health insurance premiums beyond what was expected.

3. WHEREAS, the medical profession has come under criticism by many observers and has been blamed for sending people unnecessarily to the hospital and encouraging, if not producing, the other aspects of "over-utilization."

4. WHEREAS, health insurance underwriters, labor leaders, industrial personnel directors, insurance commissioners and others have demanded that medical groups take action against their members to force them to police the applicants for health insurance benefits to see that no one receives benefits to which they are not entitled by reason of medical necessity; in other words, to prevent "over-utilization."

5. WHEREAS, we believe the real reason for the existence of the problem is the writing and selling of health insurance which encourages abuses and on which the actuarial figures have not been properly compiled.

6. WHEREAS, certain features when incorporated in health insurance policies tend to correct the abuses, these features being deductible and co-insurance clauses, allowance of certain out-patient diagnostic procedures and treatment, realistic sick-leave arrangements, and disability payments.

7. WHEREAS, conscious of the problem, doctors have been for a long period doing everything consistent with the welfare of the patients to help control this problem.

8. WHEREAS, the health insurance underwriters have done little or nothing in a practical way to correct the deficiencies in their policies as concerns the educating of their policyholders to the most economical types of policies.

9. WHEREAS, the continued existence and worsening of the problem is a threat to voluntary insurance and to the free practice of medicine.

NOW, THEREFORE, BE IT RESOLVED THAT:

1. The members of the medical profession strongly protest against the incrimination of the profession as a whole as being causative agents in the genesis or the continuation of this problem of spiraling health insurance premiums.

2. AND THAT, to the extent we are able, consistent with our primary commitment to the welfare of the patient we will continue to attempt to discourage abuses of health insurance.

3. AND THAT, the medical profession call to the attention of health insurance underwriters, labor leaders, management of industry, insurance commissioners, and to the general public its conviction that the real solution to the problem lies with the writing of better and more realistic health insurance policies.

4. AND THAT, the health insurance industry has an obligation to the individual buyer of insurance, to management and labor representatives when they are bargaining for health insurance benefits in labor contracts, and to the general public to recognize the usefulness of deductible and co-insurance clauses, realistic sick leave and disability payments arrangements, and out-patient diagnostic and treatment clauses in helping to control abuses of health insurance benefits and therefore of health insurance costs, and to do the advertising and selling job necessary to convince the buyers of health insurance of their economic value, and this industry is hereby called upon to honor this obligation.

THE CURIOUS QUANDARY IN SOCIAL SECURITY*

It's neither sound insurance nor pure welfare, but what is it, and where is it headed?

DIOGENES WITH HIS LANTERN might find that rare citizen who understands our national program of Social Security, where it is going and how it is going to get there. Somewhere there may be a taxpayer or a social security recipient who professes to understand the complicated income, outgo and grand design of the system. But even such a person may need to be de-educated and re-educated. For the truth is: Never has an economic organism so powerful as social security affected so many and been understood by so few.

Enormity of this economic organism now includes 18.5 million people who are receiving benefits at the rate of more than $1.25 billion monthly.

Admittedly, the basic humanitarian function of social security for the needy and the deserving is understandable and commendable. Otherwise the Social Security Act of 1935 never would have been enacted. The misunderstanding and confusion arise when the program is constantly liberalized and expanded, all under the guise of "insurance." We now have Social Security Insurance; Old-Age, Survivors and Disability Insurance, and other "insurance" programs imposed en masse on the population or on large segments of the citizenry.

These programs are not insurance in the accepted and established version of the term, as will be shown. Furthermore, the public should not be misled into expecting them to be insurance. "Welfare" is not the correct and understandable word either, since these programs are imposed upon rich and poor alike, including those who already "have" and those who "have not." Misunderstanding and confusion are compounded when one ponders the ambitions which social security proponents have for the future—a utopian complex of programs and policies.

Small wonder that the sober-minded are asking and exclaiming: Where are we going? . . . This can't go on. . . . Who's deciding these things? . . . Where is the leadership? . . . How are the young people of coming generations going to pay the taxes and the bills? . . .

Spokesmen for social security have tipped off what they have in mind for the future—liberalization of the disability program . . . lower retirement age for both men and women . . . automatic increases in benefits as wages and prices increase . . . major elaborations in the public assistance program . . . free medical care . . . more adequate public housing . . . federal standards in residence requirements . . . physical and vocational rehabilitation . . . better employment counseling. . . . It is safe to say that the future system may be vastly different from that which we have today.

Already we are seeing this come to pass, as witness what has just been reported for the most recent fiscal year. More than 1.5 million men, women and children were added to the benefit rolls. Benefit payments rose $1.8 billion over the previous year. About half of the increase of 1.5 million in the number of social security beneficiaries was brought in by 1960 and 1961 amendments to the law. An amendment also was responsible for a 46 per cent increase in disability payments. This was the first full fiscal year in which the amendment provided benefits to disabled workers under age 50 and to their dependents. That extended the intervention of federal social security into the state system of privately-financed workmen's compensation and compounded the duplication of disability payments to injured workers. ("Which Way in '62?," **Journal of American Insurance**, January, 1962.)

Calling All Americans for Their Mandate

"It's time," as one insurance man said, "for the American people themselves to wake up and decide what they want out of their social security program. Otherwise, we're in for a rude awakening."

If we want an insurance program meriting that terminology, major revisions would have to be made in the present social security system with respect to taxes (premiums), participants, financing, funded reserves and other cardinal points. For guidance, there is an enviable program that the private insurance industry fostered for scores of years.

If we want a social welfare program, it can be achieved by giving the present system an overhauling. Major considerations would be elimination of those able and willing to provide their own welfare and the inclusion of the needy and deserving now outside the pale of the system. Moreover, such an overhauled program should be limited to basic social objectives, on a sound financial and actuarial basis with a funded reserve, as the present system is not.

What we have now, in the words of the old proverb, is "neither fish nor flesh, nor good red herring." "Conglomeration" is the term sometimes applied to it. Its benefit formula is a blend of equity (as in private insurance) and adequacy (sociocracy), with the emphasis on adequacy. Its financing formula is a blend of

* *Reprinted from the Journal of American Insurance, published by the American Mutual Insurance Alliance, June, 1963, Vol. 39, No. 6.*

funded reserve capital (as in private insurance) and pay-as-you-go (hand-to-mouth), with only about 10 per cent of the former and 90 per cent of the latter.

With such a thin veneer of insurance, how did social security usurp the aura of insurance, and how urgent is it that the public correct its misunderstanding?

Mistaken Idea Creates "Insurance" Image

The image of the social security system as insurance has been fostered and exploited by politicians and government agencies; it has been widely glamorized by publications and statements of the Social Security Administration itself. The public generally and many important public figures have blithely accepted the insurance concept in the belief, a mistaken one, that the combined contributions of a given individual and his employer "buy" protection for him and entitle him to it because he has "paid" for it.

That is true under voluntary private insurance; the principle of individual equity is inviolate so that there is a direct relationship between contributions and benefits. One receives in insurance or annuity coverage precisely what one pays for.

But under social security there is no relation between the taxes paid by the individual and the benefits received. As stated by Frank G. Dickinson, research economist, "The old are using this (uniform) tax device to ride piggyback to the grave." A man of 50 pays into social security only for 15 years, his son for 40; both will receive the same retirement benefits for the rest of their lives, assuming that they live to the same age and that the law isn't changed in the meantime.

The minuscule insurance equity in social security's OASI program is underscored in the case of a typical worker who retired in 1960 and who had paid the maximum taxes every month beginning January, 1937. What he "prepaid" or "purchased" was a maximum monthly pension of about $7 a month, which is only a small fraction of what he will actually collect under the program.

But consider the plight of the young worker. For him the paucity of insurance equity in the social security program imposes a penalty rather than a windfall. The value of the lifetime taxes to be paid by a young person entering the labor force in 1963 (certainly in 1966) will exceed an estimated 200 per cent of the value of his lifetime benefits under existing law.

Thus no social security program provides precisely what has been paid for. The formula is not based on equity but on sociocracy—social adequacy. This socially adequate benefit is calculated to provide the "insureds" and their families with a basic income sufficient to protect against want and destitution, irrespective of the individuals' prepayments or of funded reserves put aside for them.

Through political pressures there have been so many amendments starting in 1939 that the principle of substantial individual equity has gradually been supplanted by the trend to social adequacy. In turn, the financing method has become a confusing and misunderstood hybrid of full reserve financing (as in insurance) and hand-to-mouth money which must pay the bulk of the benefits.

True, there are trust funds both for old-age insurance and for disability insurance. But these are trust funds in name and little more. They are more like conduits through which the pay-as-you-go funds flow, rather than chests for funded reserves as in voluntary private insurance. As described in an opinion by the U. S. Supreme Court, "The program is financed through a payroll tax levied on employees in covered employment, and on their employers. . . . The tax proceeds are paid into the Treasury as internal-revenue collections . . . and each year an amount equal to the proceeds is appropriated to a trust fund, from which benefits and expenses of the program are paid. . . . "

Together, the OASI Trust Fund and the Disability Insurance Trust Fund, on the basis of present scheduled taxes and benefits, are expected to produce interest equal to no more than 4 or 5 per cent of benefits. (In comparison, interest earnings of a mature funded private plan support 40 to 50 per cent of the benefits.)

> Here are the official figures for the most recent fiscal year (1962), underscoring the illusory nature of the assets and reserves in the two trust funds: At the end of the year (June 30, 1962) assets of the OASI Trust Fund were reported as $19.6 billion and those of the DI Fund $2.5 billion. But consider that expenditures under the OASI Trust Fund were about $13.3 billion for the year while income was only $12 billion. There was therefore a shrinkage of $1.3 billion in the fund's assets. Moreover, without additional tax revenues from employees and employers, the $19.6 billion in year-end assets would be wiped out in less than 1½ years of benefits at the rate they were paid in 1962.
>
> Similarly, receipts of the DI Fund were $1.088 billion for the year but expenditures totaled $1.086 billion, leaving little reserve or surplus. Without additional tax revenue, the $2.5 billion in the DI Fund would disappear in a little more than two years at the 1962 rate of benefits.

Likewise, let there be no misunderstanding about the growing magnitude of the debt being piled up against future generations. This unfunded liability—the debt—arising out of future benefits already committed under the pro-

gram has been estimated by various actuaries to be anywhere from $350 billion after the 1960 amendments to as much as $650 billion. This debt at any given time is the difference remaining when amount (2) is subtracted from amount (1) in the following: (1) the worth of all future benefits and expenses for all persons on OASDI at that given time, and (2) the sum of all future taxes with respect to such persons plus whatever is in the trust funds at that time.

Insurance Is a Contract, Not Sociocracy

The benefit formula and the financing method are only two characteristics that have created wide misunderstanding through the appropriation of the term "insurance" for social security. The key word that distinguishes insurance from charity, sociocracy or whatever social security is going to be called is "contract." Insurance got where it is and has come to be accepted because it is a contract enforceable by law whereby for a stipulated consideration, called a premium, one party (the insuring organization) undertakes to indemnify or guarantee another against loss by a certain specified contingency, or peril, called a risk, the contract being set forth in a document called a policy.

Furthermore, the insurance contract had its genesis in one of the oldest fundamentals of law—the law of contracts—whereas social security is something bequeathed as a statutory right established by legislation.

Private insurance must first qualify as insurance under the accepted definition and standards for such a commodity before it can be admitted to the industry. Likewise, the powers of insurers, as for example the kinds of insurance they may write, are closely circumscribed.

Under state regulation of insurance, close watch is kept on the condition and operations of insurers as ascertained from (1) their annual statements; (2) examinations and audits; and (3) valuation of assets and liabilities.

In the field of private insurance, full reserve financing is the test of actuarial soundness, and it is the only concept of such soundness with which the American public is generally familiar. Soundness of private insurance is assured by long-established principles and practices; the soundness of social insurance is fiscal, not actuarial, and depends mainly on the taxing power of the government.

Under requirements enforced against private insurers, the so-called trust funds of Old-Age, Survivors and Disability Insurance would be substandard and intolerable, since they are mostly pay-as-you-go petty cash funds and would be washed out if tax revenues ended.

Private insurance would even be censured and disciplined if its advertising and public statements exploited words for its services that are as illusory as "savings" and other descriptive terms used for social security. Moreover, private insurance would not be privileged to masquerade as actuarily sound if it had an unfunded liability comparable to the $350-billion to $650-billion debt estimated for social security.

> As competent authorities have pointed out, it is both politically and economically unrealistic to expect the younger generation of workers to build up a huge reserve fund (over and above present payments) to reduce that debt. Oncoming generations therefore are saddled forever with the interest charges, since the debt is permanent.

It is also a growing debt, snowballing through the deferring of scheduled tax increases, extending coverage to new groups, and increasing benefits for both retired and nonretired groups without increasing the requisite taxes. One actuarial expert has made note of proposals that could increase the permanent social security debt to more than one-half trillion dollars.

What is most serious and probably least understood of all is that because of the debt, employee and employer taxes with respect to the average new entrant into the system will always exceed the benefits he will receive.

Unfortunately for the younger generations, the sovereign power of the government to tax can compel the young to join and pay. They can, of course, bring pressure for more benefits under the illusion that more bountiful benefits are theirs; they have "paid" for them. Also, as was done to them, they can transfer the burden to future generations. But all of that will only speed up the treadmill.

The only thing the younger generation has going for it is increasing numbers and potential political influence. By 1980 there will be an increase of more than 20 million in voters 35 years of age and younger but an increase of only 9 million in those 65 and older.

Politicians and other proponents of the welfare state early discerned that the young entrants would be unlikely to protest if they could be "brainwashed" on the social security principle as an insurance principle. The crisis and the revolt will come when the "insurance" mirage vanishes and the youthening population collides head on with the questions: Who pays, how much, when, how long, why and for what? If at that point the payroll tax becomes intolerable when measured against the benefits, the only way to salvage the program financially will be through the general revenues of the government or through a combination of general revenues and a tolerable tax rate. Once the general revenues are resorted to for social security, the nation is in the early stages of socialism.

There would be less misunderstanding of social security and more public awareness of its

many implications for young and old alike were it not for two things: (1) In all the 28 years since the effective date of the Social Security Act, there has never been a thorough and comprehensive study of it by an independent private research agency, and (2) Neither is there a separate agency similar to the body of state insurance departments responsible for checking all operations, statements and publications of the Social Security Administration.

Meanwhile the public can awaken itself by pondering the many questions that sooner or later will have to be resolved.

Our social security system was given a vital place in our national economy as a means of helping the needy and the destitute cope with major economic hazards. It has become what one authoritative statesman has called a "declaration of dependence." There is a limit beyond which it cannot safely go if we are to heed the analogy drawn by Abraham Epstein, a pioneer in the development of old-age income programs: "Social security is like a drug; a limited quantity can serve a vital need; an excessive quantity can be fatal." Thus the questions persist. Where are we headed? Where is the leadership?

In the absence of public understanding and vigilance, too much of the liberalized and expanding system is being prescribed by those who are most vocal about their wants and needs, by those who are solely and immutably humanitarians and by the vote seekers. Understandably, none of these is going to initiate a thorough, unbiased study of the social security system.

Nor was it one of these who cautioned, "It is time for the American people to wake up and decide what they want out of their social security program." That was said by a perceptive, taxpaying father who knows something about the history of security—social and otherwise. Those who share his views are still not as numerous or popular as they should be. But they are hopeful—hopeful that there will be an awakening before the future closes in. Otherwise there will be little comfort or security for them and for their shocked and disillusioned children, grandchildren and myriad fellow citizens if all they can say is, "We told you so."

MEDICAL NEWS SECTION

CALENDAR

PARISH AND DISTRICT MEDICAL SOCIETY MEETINGS

Society	Date	Place
Ascension	Third Tuesday of every month	
Calcasieu	Fourth Tuesday of every other month	Lake Charles
East Baton Rouge	Second Tuesday of every month	Baton Rouge
Jefferson	Third Thursday of every month	
Lafayette	Second Tuesday of every month	Lafayette
Lafourche	Last Tuesday of every other month	
Morehouse	Third Tuesday of every month	Bastrop
Natchitoches	Second Tuesday of every month	
Orleans	Second Monday of every month	New Orleans
Ouachita	First Thursday of every month	Monroe
Rapides	First Monday of every month	Alexandria
Sabine	First Wednesday of every month	
Tangipahoa	Second and fourth Thursdays of every month	Independence
Second District	Third Thursday of every month	
Shreveport	First Tuesday of every month	Shreveport
Vernon	First Thursday of every month	

MEDICAL STUDENT FELLOWSHIPS OFFERED BY TOBACCO RESEARCH GROUP

The nation's accredited medical schools and colleges of osteopathy are again being offered student research fellowships under a Tobacco Industry Research Committee program that has already assisted nearly 600 students.

Dr. Clarence Cook Little, Scientific Director of T.I.R.C., said today this marks the ninth consecutive year in which the fellowships are being made available to encourage medical students to undertake some medical research project, whether or not they intend to seek a career in research.

Even if the students enter other areas of medicine, he said, the fellowships will provide them with some understanding of the work and problems encountered by the research scientist.

Dr. Little said a number of the nearly 600 students who previously have received fellowships have published reports on their studies in recognized medical and scientific journals, and

some have decided to become research scientists.

He said the medical school deans select the student fellows who may do work in any subject they choose under the direction of a faculty advisor. The fellowships, each one for $600, are for summer or other off-term time, he said.

The fellowship program was initiated by the Scientific Advisory Board, composed of doctors, scientists, and educators, which is responsible for T.I.R.C.'s program of research by independent scientists into tobacco use and human health. The T.I.R.C. has to date appropriated $6,250,000 for this program.

The T.I.R.C. was formed in 1954 by tobacco growers, leaf warehousemen and manufacturers to provide financial support for research into tobacco and health and to make the facts known to the public.

ELECTION OF OFFICERS THE NEW ORLEANS GRADUATE MEDICAL ASSEMBLY

The twenty-seventh annual meeting of The New Orleans Graduate Medical Assembly will be held March 2-5, 1964, headquarters at The Roosevelt Hotel.

The following officers and members of the Executive Committee have been elected for this year:

Dr. W. E. Kittredge, President
Dr. Philip H. Jones, President-Elect
Dr. George M. Haik, First Vice-President
Dr. Mannie D. Paine, Jr., Second Vice-President
Dr. L. Sidney Charbonnet, Jr., Third Vice-President
Dr. Friedrichs H. Harris, Secretary
Dr. Samuel R. Staggers, Treasurer
Dr. Daniel C. Riordan, Director of Program
Dr. Isadore Dyer, Assistant Director of Program
Dr. W. C. Rivenbark, Assistant Director of Program

Members of the Executive Committee include Doctors Walter F. Becker, Frederick F. Boyce, Ralph M. Hartwell (retiring President), Louis A. Monte, and Simon V. Ward.

MANAGEMENT OF RETINAL DETACHMENT

A symposium on the Management of Retinal Detachment will be presented on Thursday, September 26 and Friday, September 27, 1963, at the Fulton County Medical Society's Academy of Medicine, Atlanta, Georgia, under the sponsorship of the Department of Ophthalmology, Emory University School of Medicine.

The lecturers for the meeting are Dr. Robert Brockhurst, Boston, Mass.; Dr. Edward Norton, Miami, Florida; Dr. Taylor Smith, Boston, Mass.; Dr. Robert Welch, Baltimore, Maryland; and Dr. William Hagler, Atlanta, Georgia.

Registration for the meeting will be limited and registrations will be accepted in the order in which they are received. The registration fee for the course will be $50.00. For further information, write to: Director, Postgraduate Education, Department of Ophthalmology, Emory University School of Medicine, 80 Butler Street, S.E., Atlanta 3, Georgia.

TWENTIETH ANNUAL MEETING SOUTHERN CHAPTER OF THE AMERICAN COLLEGE OF CHEST PHYSICIANS

The Southern Chapter of the American College of Chest Physicians will hold its Twentieth Annual Meeting on November 17-18, 1963 in New Orleans, Louisiana, at the Monteleone Hotel. The scientific program, covering the broad aspects of clinical and surgical treatment of cardiovascular and bronchopulmonary diseases, will begin at 1:00 p. m., Sunday, November 17.

Fireside Conferences, co-sponsored by the Southern Medical Association and the Southern Chapter of the College, will be presented on Monday, November 18, from 6:00 to 8:00 p. m. at the Monteleone Hotel. These informal discussions, led by well known specialists, will include subjects of interest to general practitioners, surgeons and clinicians. All practicing physicians, interns and residents are invited to attend.

EAR, NOSE AND THROAT PLASTIC SURGEONS ELECT NATIONAL-LOCAL OFFICERS

Jack R. Anderson, M. D., a New Orleans otolaryngologist, was elected and installed president of The American Otorhinologic Society for Plastic Surgery, Inc., on March 27 during the group's scientific meeting in New Orleans. He succeeds John T. Dickinson, M. D., Pittsburgh, retiring president.

Fred Harbert, M. D., Philadelphia, former eastern regional vice president of the Society, was chosen president-elect. He will succeed Dr. Anderson who will now serve a one-year term in office.

The national Society, meeting in New Orleans, March 24-29, to discuss the latest developments in plastic surgical techniques, is composed of otolaryngologists (ear, nose and throat physicians) who perform plastic surgery of the head and neck.

Two new regional vice presidents were also elected during the business meeting. John B. Reddy, M. D., Annapolis, Md., was named eastern regional vice president, succeeding Dr. Harbert. Richard T. Farrior, M. D., Tampa, Fla., was elected southern regional vice president to succeed Dr. Anderson.

Officers re-elected for another one-year term are as follows: Joseph G. Gilbert, M. D., Roslyn

Heights, N. Y., secretary-treasurer; Ira Tresley, M. D., Chicago, mid-western regional vice president; Jesse Fuchs, M. D., Beverly Hills, Calif., western regional vice president; Joseph Gollom, M. D., Toronto, Canadian vice president; Miguel Arroyo G, M. D., Mexico City, Latin American vice president, and Lionello Ponti, M. D., Rome, Italy, European vice president.

Three directors-at-large were elected to serve for three years each: Nathan A. Bolotow, M. D., Providence, R. I.; Romeo A. Luongo, M. D., Philadelphia, and Samuel Segal, Jr., M. D., Springfield, Mass.

COURSE IN POSTGRADUATE GASTROENTEROLOGY

The Annual Course in Postgraduate Gastroenterology will be given at the Shoreham Hotel in Washington, D. C., October 24, 25, and 26, 1963.

This year the Moderators for the Course will be Dr. I. Snapper, Director of Medical Education, Beth-El Hospital, Brooklyn, N. Y. and Dr. Robert J. Coffey, Professor of Surgery, Georgetown University School of Medicine, Washington, D. C.

The faculty for the Course will be drawn from the Medical Schools in and around Washington. The subject matter to be covered, from the medical as well as the surgical viewpoint, will be essentially, the diagnosis and treatment of gastrointestinal diseases and comprehensive discussions of diseases of the mouth, esophagus, stomach, pancreas, spleen, liver and gallbladder, colon and rectum. A clinical session will be held at one of the hospitals in Washington in addition to the several individual papers to be presented.

For further information and enrollment, write to the American College of Gastroenterology, 33 West 60th Street, New York 23, N. Y.

BOOK REVIEWS

Gastroenterology; by Henry Bockus, Volume I, 2d ed., Saunders, 1963, 3v v. 1, 958 p. $25.00.

We have long awaited revision of Dr. Bockus' monumental textbook of Gastroenterology. The field has grown so complex that Dr. Bockus has wisely resorted to the multiple author technic. Each author is a recognized authority. The chapter on the important peptic ulcer is, for example, well written and complete. It contains traditional clinical and therapeutic material and is well integrated with recent experimental advances.

This series of volumes (the second and third to appear later in 1963) will be indispensable to practicing internists and gastroenterologists.

FRED M. HUNTER, M. D.

Ophthalmology in the Tropics; by E. J. Somerset. Publishers—Bailliere Tindall and Cox, London. 1962. Exclusive U. S. agents—The Williams and Wilkins Co., Baltimore. 171 p. $8.50.

The author states his purpose in writing this book is to present in one volume a short yet inclusive description of those tropical diseases an ophthalmic surgeon may find in tropical countries. He stresses it will not replace the larger treatises on tropical diseases but will amplify the usually inadequate discriptions found in general textbooks of ophthalmology and tropical medicine.

The difficulty in becoming familiar with all tropical diseases is admitted; instead, the author advises the ophthalmologist just recently new to a particular area in which tropical diseases are present, to acquaint himself as soon as possible with the characteristics of those diseases present in the area. To facilitate that goal and provide a starting point the author has written this textbook.

The first chapter, General Considerations, should be read by all physicians regardless of geographical habitat, having only as a common denominator patients who are undernourished, illiterate, or uneducated. Somerset relates numerous ways in which nominal differences in anatomy, economy, weather, culture, and race affect the appearance, course, treatment, and effects of a disease. The commonplace misadventures that may occur in the tropics are intriging. In most American clinics the traumatic loss of vision in a child is usually from a stone, stick, knife, snowball, dart, etc. striking the eye. But the author mentions bird pecks, insect stings and bites, spitting snakes, couching, and indigenous practices such as application of cattle urine, lime juice, or solid lime materials each contributing more than their share of blindness.

The deficiency of vitamin A and B-complex, either together or separately, are discussed both as primary ocular diseases and as a contributing factor to other ocular diseases. The common tropical diseases such as leprosy, cholera, bacillary dysentery, protozoan, trematode, and filarial infestations and their effects upon the eye, and endemic poisoning such as endemic dropsy, are presented in a clear, concise manner. Each disease has a brief account of the author's method of treatment.

One drawback with the book is that though it is well indexed there is essentially no bibliography. While the book is intended as a textbook in its own right, a greater service would have been offered the reader if a good bibliography was also provided along with the author's experiences.

This book serves as an ideal primer for those physicians such as general practitioners, ophthalmologists, internists, or pediatricians who want and need more than a passing knowledge of tropical diseases and their effects upon the eye. In addition, certain chapters, especially the first on General Considerations, should be required reading for all physicians, especially those in training.

Figures—60

Plates—2, in color.

DAVID G. HANEY, M. D.

Dermatoses Due to Environmental and Physical Factors; by Rees B. Rees, Ed., C. C Thomas, 1962, 303 p. $12.25.

The high caliber of the contributors to this monograph ensures a book of equally high merit. Dermatoses and dermatitides caused by external agents are of extreme importance, and contact dermatitis alone perhaps accounts for half of industrial compensation cases. But the book has much more than this. The role of sunlight, age, photosensitivity, heat and cold, are gone into in detail. There is an excellent chapter on the sweat retention syndrome by Lobitz, who has done first rate experimental work in this area. One wonders about the inclusion of the chapter on skin disorders of the lower extremity amputee. But it is well done and Levy and Barnes have gathered much useful information. Perhaps the largest amount of the book deals with contact allergy and the roster of authors contains such dignitaries as Stephen and William Epstein, Rostenberg, Shelley, Bennett and Rees.

The book is highly recommended to dermatologists, allergists, and to all who deal with patients whose skin is intolerant to one or another environmental irritant.

VINCENT J. DERBES, M. D.

Cosmetic Chemistry for Dermatologists; by Emil G. Klarmann. C. C Thomas, Springfield, 1962. 126 p. $5.75.

This interesting book permits the physician to obtain a good review of the subject in relatively short time. The sales of cosmetics in this country approach the two billion dollar mark, an impressive figure even in these days of the New Frontier. The author starts his book with a review of some legal aspects of labelling and advertising of cosmetics. Cosmetics may be drugs also, when they modify some physiological function, e.g., when they act as antiperspirants.

The basic cosmetic "line'" involves the three fundamental steps of cleansing, conditioning, and make up and the appropriate cosmetics modified for dry, oily, and normal skin.

Chapters follow on emulsions and emulsification, cleansing agents, conditioning agents, foundation cosmetics, make-up, antiperspirants and deodorants, hair dressings and tonics, hair waving, epilation and depilation, hair dyes, suntan preparations, perfumes, toilet waters and colognes, hormone and vitamin cosmetics, baby cosmetics, bath cosmetics, bleach and freckle creams, and a chapter on cutaneous reactions from cosmetics. There is a brief but well chosen bibliography.

The book, though short, is written by an experienced author, in an engaging and informative style. It is highly recommended to all who must answer questions posed by women about cosmetics. Of primary interest perhaps to dermatologists, it is well worth reading by obstetricians and gynecologists, by general practitioners, and by internists.

V. J. DERBES, M. D.

Physiology of the Circulation in Human Limbs in Health and Disease; by John T. Shepherd, M. D., Professor of Physiology, Mayo Foundation, 179 illustrations, W. B. Saunders Company, Philadelphia and London, 1963. 416 p. $12.00.

The title of this volume is somewhat deceptive in implying that it is concerned only with the physiology of the circulation in human limbs. Actually, the volume represents an excellent summary of information relative to the nervous, chemical and humoral control of peripheral circulation as well as the changes which occur in various disease states.

The material is divided into four sections. The first section follows an introduction which deals with general methods of study of limb circulation and is concerned primarily with the nervous control of skin and muscle blood vessels and the effects of sympathetic neurectomy. The second section brings together results of investigations on the effects of temperature, exercise, changes in transmural pressure and in blood CO_2 tension and pH. There is also a short account of change in limb blood flow with age and a good discussion of the capacity and distensibility of the limb blood vessels. The third section on humoral control of blood vessels is particularly welcome since the author has brought together results which are scattered through the literature and often difficult to find. The material includes effects of the epinephrines, histamine, bradykinin, etc. As indicated above, the last section concerns the limb circulation in peripheral vascular diseases, orthostatic hypotension, arteriovenous fistulas, etc. Particularly useful will be the short discussion in fainting and smoking.

Dr. Shepherd has achieved his objectives of writing a monograph which will appeal to work-

ers starting out in the field as well as to experienced investigators and the clinician interested in the vascular system. The reviewer is particularly happy that Dr. Shepherd decided to discuss the situation in man. As a teacher of physiology I have been distressed by the fact that so much of the information given in textbooks has been derived from experiments on four-footed animals and carried over to man. This has been very misleading since much of man's mass is in his limbs in contra-distinction to that of lower animals. The present volume is therefore exceedingly welcome as a source of definitive information as relates to man.

H. S. Mayerson, Ph.D.

Medical Resident's Manual; by Frank B. Flood, Richard J. Kennedy and William J. Grace. Appleton - Century - Crofts, New York, 1962. 311 p. $4.95.

This book is excellent for its intended purpose and has excellent up-to-date references. I cannot justify the extensive position in electrocardiography, however. I would recommend it to every medical resident.

P. O. Knight, M. D.

Coronary Heart Disease, The Seventh Hahnemann Symposium, edited by William Likoff, M. D. and John H. Moyer, M. D., Grune and Stratton, New York, 1963. 483 p. $17.75.

The proceedings of the Seventh Hahnemann Symposium held on April 16-18, 1962 have been compiled in this volume.

The book represents a variegated "collection" of papers presented by a number (108 in all) of eminent and outstanding contributors. It includes discussions on: the anatomy of the coronary circulation, coronary blood flow and myocardial metabolism, etiology of atherosclerosis, pathogenesis, diagnosis, treatment and prognosis of coronary heart disease and rehabilitation of the patient handicapped by this disorder. Each article contains a brief but selected bibliography. Throughout the book the illustrations are of good quality.

As might be expected there are differences in opinion and experience in practically every phase discussed. Some articles are particularly good but for the most part they are too brief and sketchy. To illustrate with a few examples: the paper entitled "Mechanisms Whereby the Contractile Properties of the Heart can be Altered" takes up 26 lines; the paper entitled "The Myocardial Contractile Proteins" consists of 34 lines.

There are four lectureships: (a) "Thromboatherosclerosis", by Dr. M. Friedman; (b) "Some Controversial Subjects in the Diagnosis and Treatment of Coronary Heart Disease", by Dr. C. K. Friedberg; (c) "Errors in the Diagnosis of Coronary Heart Disease", by Dr. P. D. White; and (d) "The Recognition of Ischemic Heart Disease without Clinical Infarction", by Drs. A. Leatham and G. Hale. These are particularly commendable.

The major contribution of this book to the already crowded bookshelves is to re-emphasize, as Dr. Likoff points out in the introduction, that "since each of these aspects of the total problem of coronary heart disease remain unanswered, it is obvious that what we are really faced with is not alternatives of action in the care of patients but the lack of facts upon which to act."

Jorge Martinez-Lopez, M. D.

Surgery; By 24 authors. Edited by Richard Warren. W. B. Saunders Company, Philadelphia, 1963. 1,345 pages. 511 illustrations. $19.50.

The book is a superb effort to provide a modern-day extension of Homans' classic textbook on surgery. Written by twenty-four members of the faculty of Harvard Medical School and edited by Richard Warren, the text yields a concise, yet detailed presentation on surgery of each of the organ systems. Additionally, separate chapters are devoted to wound healing, wound management, grafting and substitution, systemic effects of trauma, visceral diseases in surgical patients, external and parenteral therapy, burns, infections, tumors, anesthesia, extensive trauma, and neonatal surgery.

Details of surgical technic are wisely omitted, with few exceptions, while basic principles of diagnosis and treatment are emphasized. Whereas the book is an excellent text for junior and senior medical students, it is quite sufficiently detailed to be extremely valuable to residents and practicing physicians for up-to-date coverage of specific problems.

Charles W. Pearce, M. D.

PUBLICATIONS RECEIVED

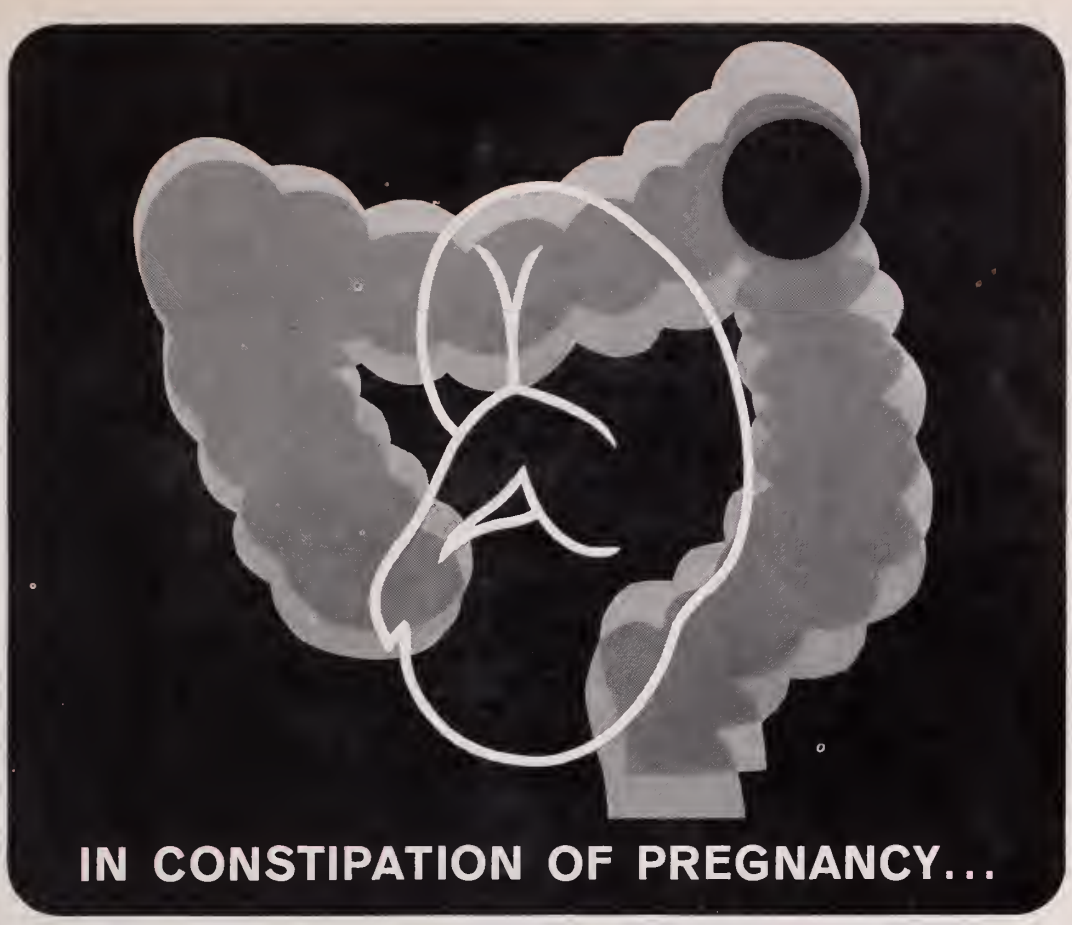
Appleton-Century-Crofts, N. Y.: An Introduction to the Science of Human Behavior, by John I. Nurnberger, M. D., C. B. Ferster, Ph.D., and John Paul Brady, M. D.

Doubleday & Company, Inc., Garden City, N. Y.: Margin of Safety, by John Rowan Wilson. (A doctor tells the controversial inside story of the development of the polio vaccines.)

Dover Publications, Inc., N. Y.: The Specificity of Serological Reactions, Revised Edition by Karl Landsteiner, M. D., with a chapter on Molecular Structure and Intermolecular Forces by Linus Pauling.

Grune & Stratton, N. Y.: An Atlas of Hemodynamics of the Cardiovascular System, by Howard L. Moscovitz, M. D., Ephraim Donoso, M. D., Ira J. Gelb, M. D., and Robert J. Wilder, M. D.

Charles C Thomas, Publisher, Springfield, Ill.: The Practice of Country Radiology, by Donald de Forest Bauer, M. D.; A Manual of Diabetes for the House Officer, by William T. Nunes, Major, MC.



BULK IS BASIC

METAMUCIL® IS BASIC...

(brand of psyllium hydrophilic mucilloid)

Metamucil corrects constipation in pregnant patients without disturbing either the rhythmic or digestive functions of the gastrointestinal tract.

By adding a soft, hydrophilic, easily-compressed bulk to the diet, Metamucil augments and reinforces the natural bulk stimulus to intestinal peristalsis and the defecation reflex. This purely local action softens hard fecal masses, increases muscle tone and helps reestablish the normal rhythm of elimination.

Since its action is not systemic and not habit forming, Metamucil may be safely administered throughout pregnancy.

Average Adult Dose: One rounded teaspoonful of Metamucil powder (or one packet of Instant Mix Metamucil) in a glass of cool liquid.

Metamucil is available as Metamucil powder in 4-, 8- and 16-ounce containers and as flavored Instant Mix Metamucil in cartons containing 16 and 30 single-dose packets.

G. D. SEARLE & CO., Chicago 80, Illinois

Research in the Service of Medicine

For the Patient Over 50 with Digestive Distress

KANUMODIC®

Each tablet contains methscopolamine nitrate, 2 mg.; and pentobarbital (Warning: May be habit-forming), 8 mg.; plus KANULASE® (cellulase standardized to 9 mg.; combined with pepsin, N.F., 150 mg.; glutamic acid hydrochloride, 200 mg.; pancreatin, N.F., 500 mg.; ox bile extract, 100 mg.).

TESTED—PROVED

Table I—Symptomatic Relief in 25 Patients
(totalling 100 symptoms)

	COMPLETE RELIEF	PARTIAL RELIEF	NO RELIEF	TOTAL SYMPTOMS
KANUMODIC	59	17	24	100
PLACEBO	1	33	61	95

In a second study, Kanumodic produced "highly gratifying symptomatic relief" in 46 of the 60 patients participating.

Tested in patients over 50*. . . The effectiveness of Kanumodic was matched against placebo response in a study involving twenty-five "over 50 patients" suffering from functional bowel distress. All patients complained of one or more symptoms. A follow-up study of 60 additional cases (average age, 55.3 years) was also conducted.

Proved in patients over 50* . . . The response noted in the pilot study is charted above.

*McHardy, G., and Balart, L.: Curr. Ther. Res. *4*:153, 1962.

Dosage: 1 or 2 tablets, swallowed whole with each meal.

Cautions: Federal law prohibits dispensing without prescription. Side effects such as dryness of mouth, blurring of vision, and urinary retention may occur occasionally with large doses. This product is contraindicated in the presence of glaucoma or prostatic hypertrophy. Glutamic acid hydrochloride is usually not given to patients with peptic ulcer.

DORSEY LABORATORIES • Lincoln, Nebraska



For comprehensive control of the whole pain complex... helps the whole patient

Like a triad, the action of Trancogesic is direct and simple as 1,2,3. Its tranquilaxant component — chlormezanone — 1. reduces emotional reaction to pain . . . 2. decreases skeletal muscle spasm . . . and 3. its aspirin component dims the patient's perception of pain. Thus, Trancogesic controls the *whole* pain complex, helps the *whole* patient — *with unsurpassed tolerance.*

Each tablet of Trancogesic contains 100 mg. of chlormezanone and 300 mg. (5 grains) of aspirin. The usual adult dosage is 2 tablets of Trancogesic three or four times daily; the dosage suggested for children from 5 to 12 years is 1 tablet three or four times daily. Reactions to Trancogesic have been minor — gastric distress, and an occasional weakness, sedation or dizziness. Ordinarily, these may be reversed by a reduction in dosage or temporary withdrawal of the drug. Trancogesic is contraindicated in persons known or suspected to have an idiosyncrasy to acetylsalicylic acid. WINTHROP LABORATORIES, NEW YORK 18, N. Y.

TRANCOGESIC* Winthrop

CHLORMEZANONE with ASPIRIN

*TRADEMARK 100 MG. 300 MG. -1778M

Browne-McHardy Clinics

MAIN CLINIC
3636 St. Charles Ave.
New Orleans 15, La.
TWinbrook 9-2376

GRAVIER ST. DIVISION
630 Gravier St.
New Orleans 12, La.
524-1605

VETERANS HIGHWAY DIVISION
8601 Veterans Memorial Hwy.
Metairie, La.
VErnon 3-7341

INTERNAL MEDICINE
Cardiology
Endocrinology
Gastroenterology
Hematology
Rheumatology

Donovan C. Browne, M. D.
Wiley H. Jenkins, M. D.
Robert C. Judice, M. D.
John T. Leckert, M. D.
G. Gordon McHardy, M. D.
Robert J. McHardy, M. D.
Swan S. Ward, M. D.
George E. Welch, M. D.
Guy T. Williams, M. D.

DERMATOLOGY
William Burroughs, M. D.

DISEASES OF THE CHEST
Joseph E. Blum, Jr., M. D.

EAR, NOSE and THROAT
Norma Kearby, M. D.

GENERAL SURGERY
Claude C. Craighead, M. D.
Raul G. Reyes, M. D.

OBSTETRICS and GYNECOLOGY
C. Gordon Johnson, M. D.
Robert I. Ayerst, M. D.
James M. Todd, Jr., M. D.

OPHTHALMOLOGY
Oliver H. Dabezies, M. D.

INDUSTRIAL MEDICINE
Ralph J. McDonough, M. D.
Albert W. Auld, M. D.

PEDIATRICS
Carl E. Kemmerly, M. D.
Milton H. Donaldson, M. D.

RADIOLOGY and RADIOTHERAPY
Charles O'Dowd Lilly, M. D.
Joseph B. Marino, M. D.
Walter McDowell, M. D.

UROLOGY
John F. Lally, M. D.

AUXILIARY SERVICES
Cytology
Diabetics
Electroencephalograph
Endoscopy
Medical Laboratory
Pharmacy
Physical Therapy
Pulmonary Function Studies

FALCON

sterile
disposable
plastic
petri dishes

All Falcon petri dishes are distinguished by certain properties which make these one-use products mandatory for efficient, dependoble ond economicol loborotory procedure. Some of these feotures are:

- molded of clear polystyrene plastic
- use once and discard
- eliminate autoclaving, washing and storing
- high optical clarity not equaled in other types of dishes
- clear bottom, with vision unimpaired by a center button
- uniformly flat and level
- etched area for convenient marking
- no breakage . . . safe to handle, store and ship
- sterile to the instant of use
- more economical than reusables
- inert to all common biological materials

PEACOCK
SURGICAL COMPANY INC

1235 TEXAS AVENUE
SHREVEPORT, LOUISIANA





In Sprains, Strains and Muscle Spasm, 'Soma' Compound

numbs the pain...not the patient

A potent analgesic and a superior muscle relaxant

1. A sprain or fracture is not a big clinical problem—but it does hurt. And if there is housework to do and kids to mind, the patient needs something to numb the pain.

2. A.P.C. compounds have limited usefulness; and the patient can buy them without your prescription. Unfortunately, most of them are too mild to be effective for sprains—and more potent products too often make the patient feel 'dopey'.

3. 'Soma' Compound is ideal in these cases. Since it contains both 'Soma' (carisoprodol) and acetophenetidin it is both a potent analgesic and a superior muscle relaxant; it also contains caffeine to offset any drowsiness *("numbs the pain ... not the patient")*.

4. Why not try 'Soma' Compound? Dosage is 1 or 2 tablets q.i.d. For more severe pain, try 'Soma' Compound + Codeine. Dosage: 1 or 2 tablets q.i.d.

5. Hypersensitivity to carisoprodol may occur rarely. Codeine may produce addiction, nausea, vomiting, constipation or miosis.

Soma® Compound

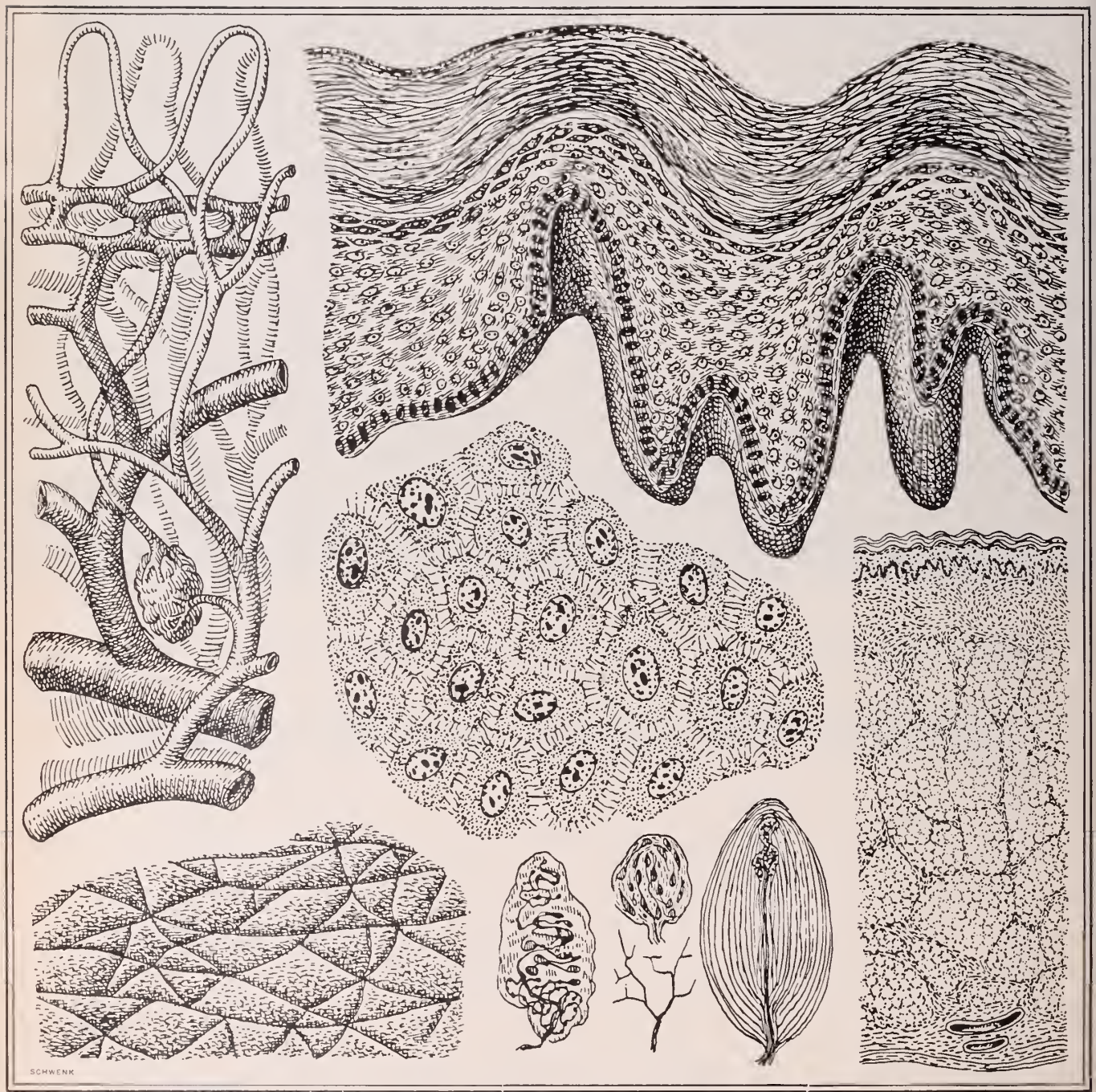
carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg.

Soma® Compound + Codeine

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg., codeine phosphate 16 mg. (Warning—may be habit forming.)

®WALLACE LABORATORIES / *Cranbury, N.J.*

CSO-9193


SCHWENK

Skin Deep

Allergic and inflammatory dermatoses, including psoriasis, have in many patients shown dramatic response to ARISTOCORT Triamcinolone systemic therapy. But it also provides gratifying symptomatic control with only minimal interference with other metabolic functions. In this respect, ARISTOCORT Triamcinolone, when compared with other corticosteroids, old and new, is distinguished. Typical steroid problems of sodium retention and edema, undesirable euphoria, or voracious appetite and excessive weight gain rarely occur.

ARISTOCORT Triamcinolone is indicated when anti-inflammatory, anti-allergic action of glucocorticoids is desired. SIDE EFFECTS of glucocorticoids generally: Cushingoid effects, hirsutism, leucopenia, purpura, vertigo, fatigue, increased hyperglycemia, osteoporosis, gastrointestinal hemorrhage, cataracts, growth suppression in children and increased intracranial pressure. Other glucocorticoid effects thought more likely to occur with triamcinolone: reversible weakness of muscles and flushing of face.

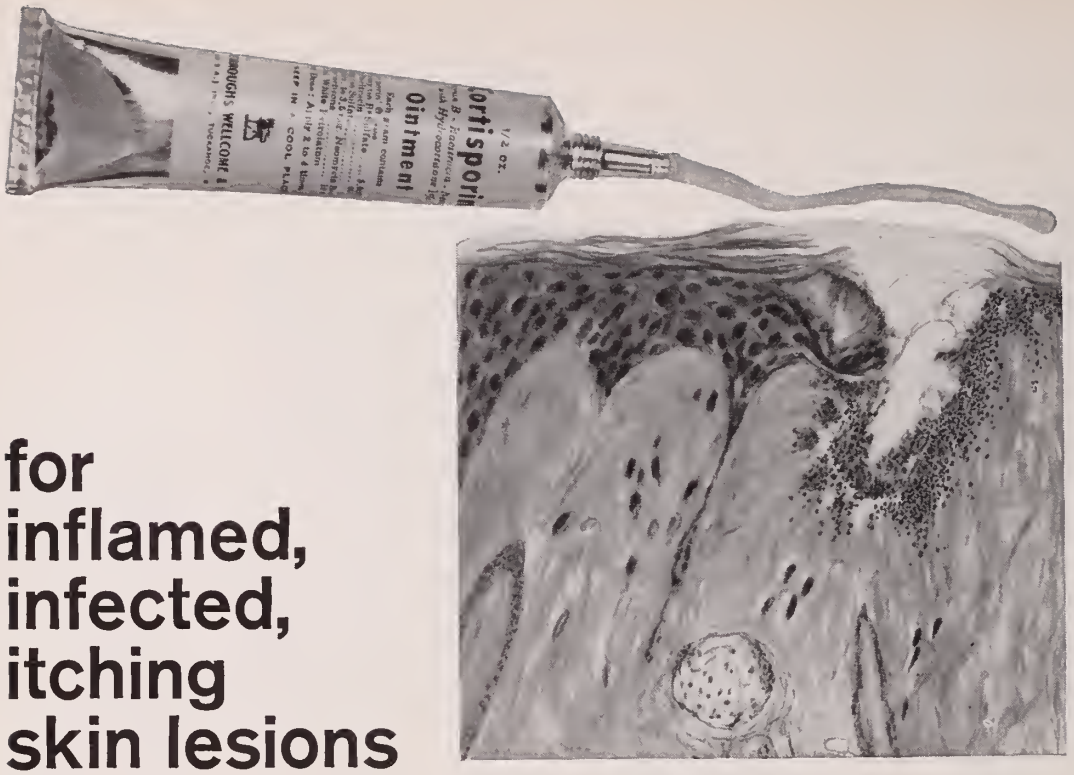
PRECAUTIONS: ARISTOCORT Triamcinolone should be used with extreme caution in viral infection, particularly herpes simplex and chicken pox, in tubercular or fungal infection, in active peptic ulcer, acute glomerular nephritis or myasthenia gravis.

FORMULA—Tablets (scored) containing 1 mg., 2 mg. or 4 mg. of triamcinolone. Syrup — 2 mg. of triamcinolone diacetate per 5 cc. (5 mg. of triamcinolone diacetate is equivalent to 4 mg. of triamcinolone).

Aristocort®
Triamcinolone

Maximum steroid benefits with minimum steroid penalty

Lederle LEDERLE LABORATORIES • A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York
164-R-3 (DC31-S)



for inflamed, infected, itching skin lesions

anti-inflammatory / bactericidal / antipruritic

'CORTISPORIN'® brand OINTMENT

POLYMYXIN B-BACITRACIN-NEOMYCIN WITH HYDROCORTISONE 1%

Each gram contains:
'Aerosporin'® brand Polymyxin B* Sulfate 5,000 Units; Zinc Bacitracin 400 Units; Neomycin Sulfate 5 mg.; Hydrocortisone 10 mg. (1%).

- relieves pain and itching
- reduces inflammation and edema
- provides bactericidal action against most gram-positive and gram-negative organisms, including *Pseudomonas aeruginosa*
- rarely sensitizes

General Indications: Wherever inflammation or infection occurs and is accessible for topical therapy, as in burns, wounds, skin grafts; and plastic proctologic, gynecologic, or general surgical procedures.

Dermatologic Indications: Atopic, contact, stasis, infectious eczematoid, and lichenoid dermatitis; neurodermatitis, eczema, pyoderma; anogenital pruritus; primary dermatoses with or without secondary infection; external otitis.

Caution: As with other antibiotic products, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

Contraindications: Local application is contraindicated in tuberculous conditions of the skin, herpes simplex, vaccinia and varicella.

Available: In tubes of ½ oz. with applicator tip and ⅛ oz. with ophthalmic tip. Although the ⅛ oz. tube is intended for ophthalmic use, it may be used topically.

Complete literature available on request from Professional Services Dept. PML.

*U.S. PAT. NOS. 2,565,057 AND 2,695,261

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.



Protects your angina patient better than vasodilators alone

'Miltrate' contains both pentaerythritol tetranitrate, which dilates the patient's coronary arteries, and meprobamate, which relieves his anxiety about his condition. Thus 'Miltrate' protects your angina patient better than vasodilators alone.

Pentaerythritol tetranitrate may infrequently cause nausea and mild headache, usually transient. Slight drowsiness may occur with meprobamate and, rarely, allergic reactions. Meprobamate may increase effects of excessive alcohol. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Like all nitrate-containing drugs, 'Miltrate' should be given with caution in glaucoma.

Dosage: 1 or 2 tablets *before meals* and at bedtime. Individualization required.
Supplied: Bottles of 50 tablets.

CML-9646

Miltrate®

meprobamate 200 mg.+
pentaerythritol tetranitrate 10 mg.

WALLACE LABORATORIES / *Cranbury, N. J.*

reduce or obviate the need for transfusions and their attendant dangers

KOAGAMIN is indicated whenever capillary or venous bleeding presents a problem.
KOAGAMIN has an outstanding safety record -- in 25 years of use no report of an untoward reaction has been received; however, it should be used with care on patients with a predisposition to thrombosis.



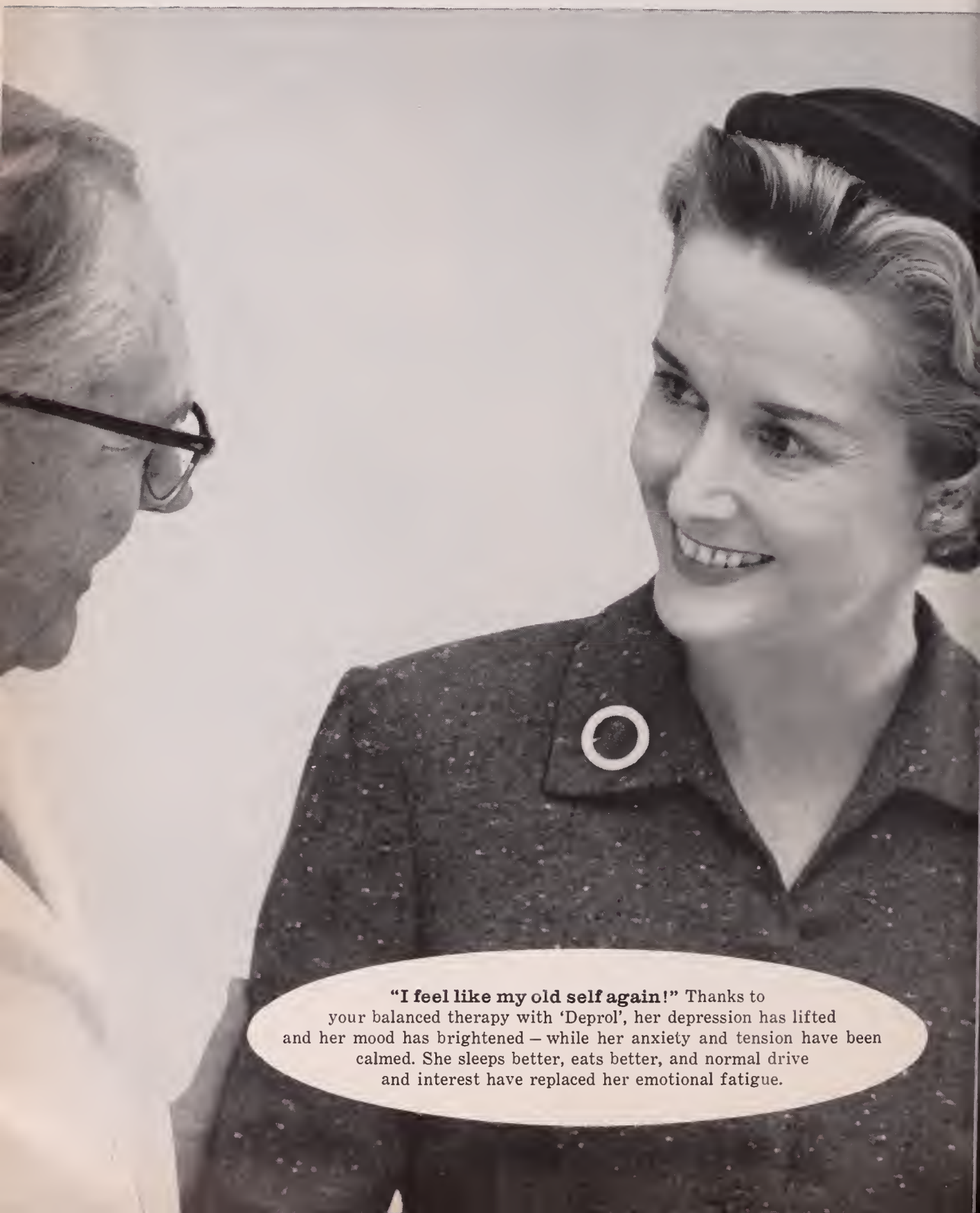
KOAGAMIN®

parenteral hemostat

Each cc contains: 5 mg. oxalic acid, 2.5 mg. malonic acid, phenol 0.25%; sodium carbonate as buffer.
Complete data with each 10cc vial. Therapy chart on request.

CHATHAM PHARMACEUTICALS, INC.
Newark 2, New Jersey
Distributed in Canada by Austin Laboratories, Ltd. • Paris, Ontario

Lifts depression..



"I feel like my old self again!" Thanks to your balanced therapy with 'Deprol', her depression has lifted and her mood has brightened – while her anxiety and tension have been calmed. She sleeps better, eats better, and normal drive and interest have replaced her emotional fatigue.

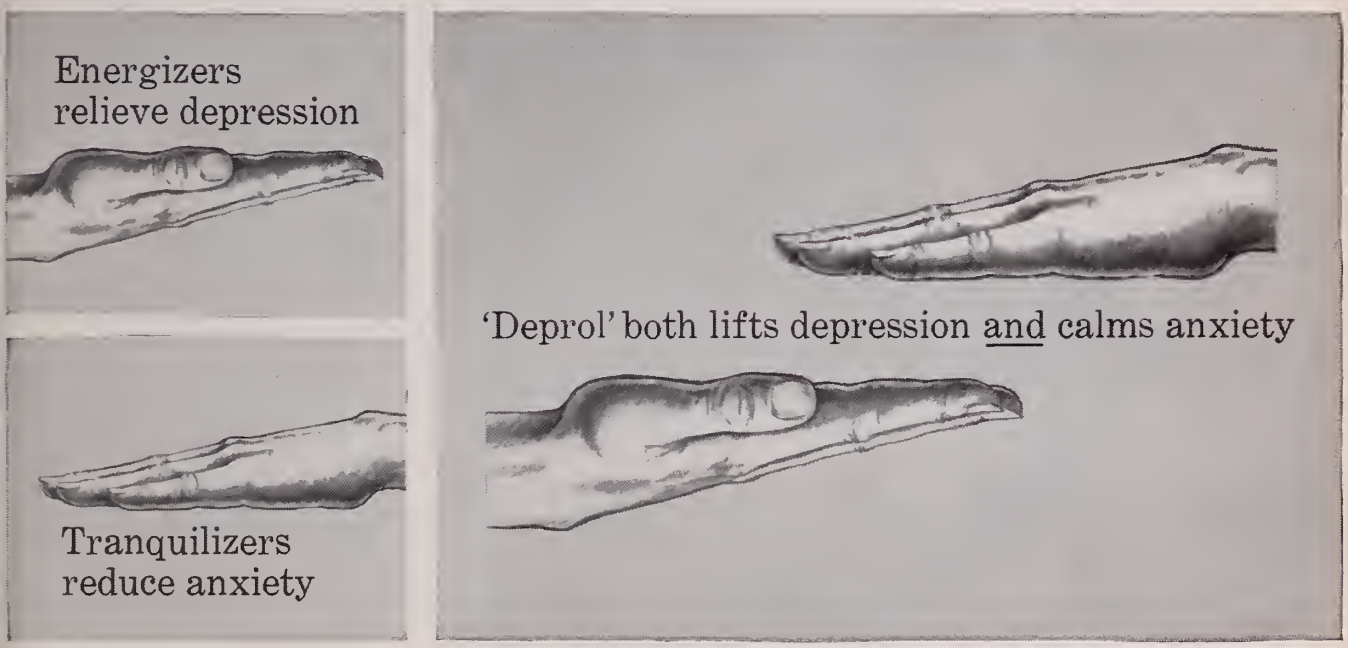
as it calms anxiety

Brightens mood...relaxes tension

Energizers may stimulate the depressed patient, but they often aggravate anxiety and insomnia. Tranquilizers may help the anxious patient, but they often deepen depression and emotional fatigue.

'Deprol' avoids these "seesaw" effects; it relieves both depression and anxiety. Moreover, it does not cause liver damage, psychotic reactions or changes in sexual function.

Slight drowsiness and, rarely, allergic reactions, due to meprobamate, and occasional dizziness or feeling of depersonalization in higher dosage, due to benactyzine, may occur. Meprobamate may increase effects of excessive alcohol. Use with care in patients with suicidal tendencies. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Withdraw gradually after prolonged use at high dosage.



Usual Dosage: 1 tablet q.i.d. May be increased gradually, as needed, to 3 tablets q.i.d.; with establishment of relief, may be reduced gradually to maintenance levels.

▲Deprol▲®

meprobamate 400 mg.
+ benactyzine 1 mg.

CD-9259

WALLACE LABORATORIES / *Cranbury, N.J.*

HOW TO WIN FRIENDS...

little



New
Orange Flavored
Bayer Aspirin for Children
is sweet
all the way through,
so children
take it readily.
The GRIP-TIGHT CAP
on the bottle
helps keep them
from taking it
on their own.

Bottles of 50 tablets
(1¼ grains each)

NOW!
NEW ORANGE FLAVOR!

We will be pleased to send
professional samples on request.

THE BAYER COMPANY
Division of Sterling Drug Inc.
1450 Broadway, New York 18, N.Y.



STARTING TOMORROW MORNING 

this capsule can help one of your overweight patients do without her favorite (fattening) foods at meals—and during all the hours in between.

Dexamyl® Spansule®

Trademark — brand of sustained release capsules

Each No. 2 capsule contains 15 mg. of Dexedrine® (brand of dextro amphetamine sulfate) and 1½ gr. of amobarbital, derivative of barbituric acid [Warning, may be habit forming]. Each No. 1 capsule contains 10 mg. of Dexedrine (brand of dextro amphetamine sulfate) and 1 gr. of amobarbital [Warning, may be habit forming].

The active ingredients of the 'Spansule' capsule are so prepared that a therapeutic dose is released promptly and the remaining medication, released gradually and without interruption, sustains the effect for 10 to 12 hours.

INDICATIONS: (1) For control of appetite in overweight; (2) for mood elevation in depressive states.

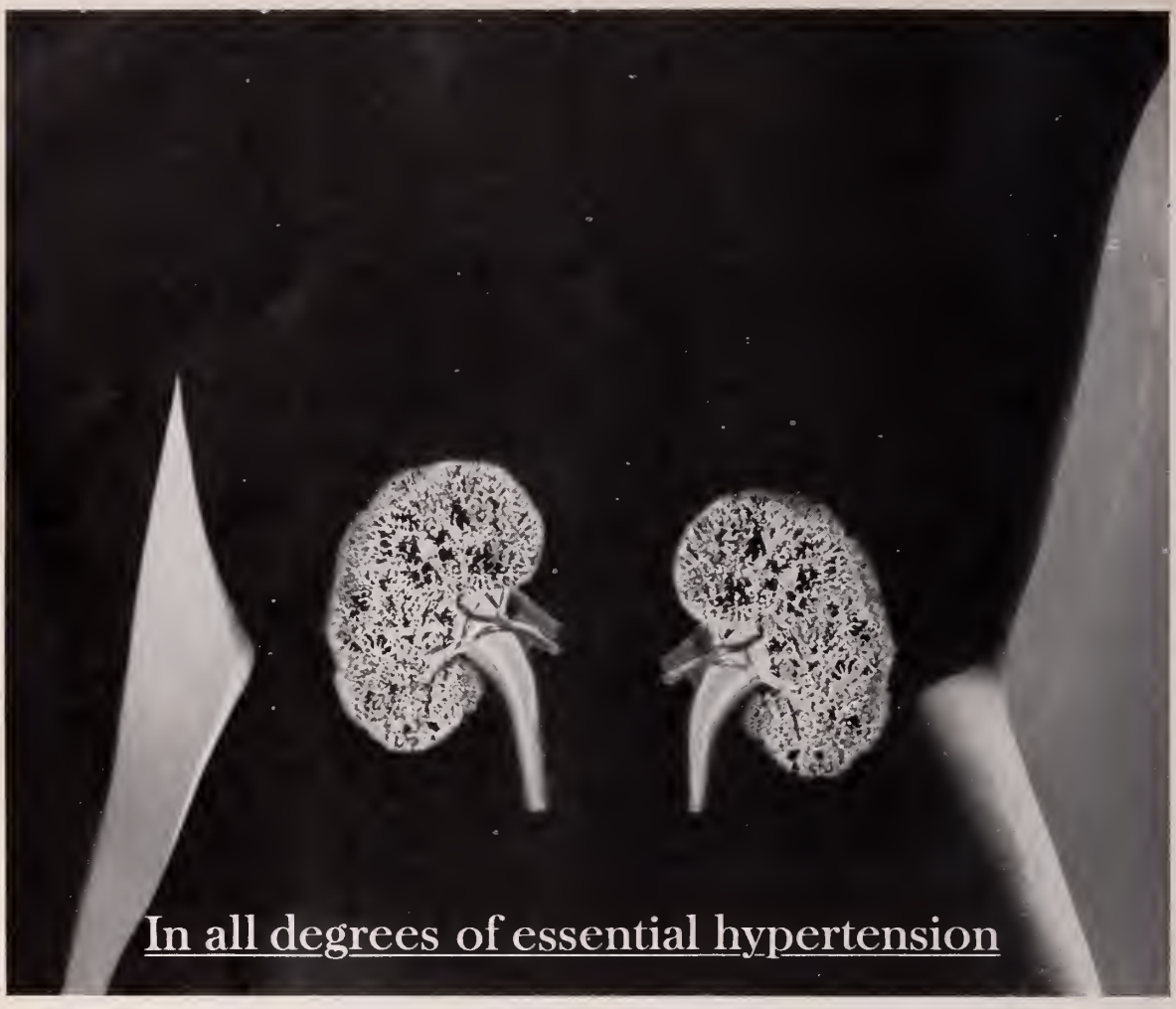
USUAL DOSAGE: One 'Dexamyl' *Spansule* capsule taken in the morning.

SIDE EFFECTS: Insomnia, excitability and increased motor activity are infrequent and ordinarily mild.

CAUTIONS: Use with caution in patients hypersensitive to sympathomimetics or barbiturates and in coronary or cardiovascular disease or severe hypertension. Excessive use of the amphetamines by unstable individuals may result in a psychological dependence; in these rare instances withdrawal of medication is recommended. It is generally recognized that in pregnant patients all medications should be used cautiously, especially in the first trimester.

SUPPLIED: Bottles of 50 capsules.

Smith Kline & French Laboratories SK&F *Prescribing information Jan. 1963*



Help protect the kidneys and other threatened organs

When treatment of hypertension is effective the danger of damage to the renal system is reduced.[1-2] "Hypertensive patients suffer from vascular deterioration roughly proportional to the severity of the hypertension... Reduction of blood pressure to normotensive levels reduces or arrests the progress of vascular damage with a resultant decrease in morbidity and mortality."[1] *Because Rautrax-N lowers blood pressure so effectively, it will help provide this important protection not only for the kidneys but also for the heart and brain of your hypertensive patients.* Rautrax-N is effective in mild,[3] moderate,[3,4] or severe hypertension.[4,5]

Dosage: Initially, 1 to 4 tablets daily preferably at mealtime. For maintenance, 1 or 2 tablets daily.

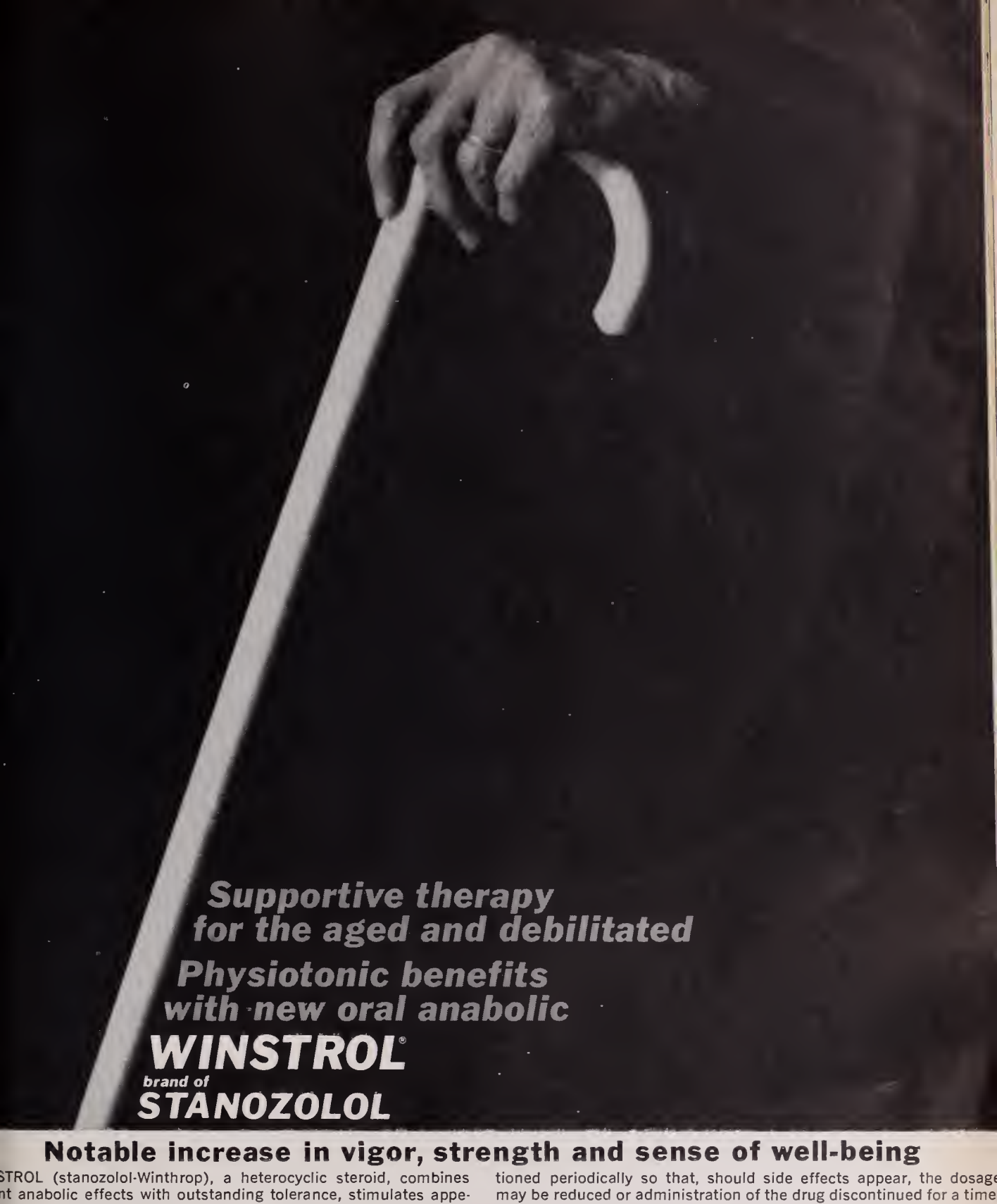
Side effects and precautions: Rauwolfia preparations may cause reversible extrapyramidal symptoms and emotional depression. Caution indicated in use with depression, suicidal tendencies, peptic ulcer. Minor side effects: diarrhea, weight gain, nausea, drowsiness. Bendroflumethiazide may cause reversible hyperuricemia and/or gout, unmask latent diabetes, increase glycosuria in diabetics. Caution indicated in use for patients on digitalis, with severely damaged kidneys, renal insufficiency, increasing azotemia, cirrhosis. Contraindicated in complete renal shutdown. Minor side effects: leg or abdominal cramps, pruritis, paresthesias, mild rashes.

Supply: Rautrax-N—capsule-shaped tablets providing 50 mg. Raudixin® [Rauwolfia serpentina whole root], 4 mg. Naturetin® [bendroflumethiazide], and 400 mg. potassium chloride. *Rautrax-N Modified*—50 mg. Raudixin [Rauwolfia serpentina whole root], 2 mg. Naturetin [bendroflumethiazide], and 400 mg. potassium chloride, in capsule-shaped tablets. For full information, see your Squibb Product Reference or Product Brief.

References: (1) Moyer, J. H., and Heider, C.: Am. J. Cardiol. *9*:920 (June) 1962. (2) Brest, A. N., and Moyer, J. H.: Pennsylvania M. J. *63*:545 (Apr.) 1960. (3) Berry, R. L., and Bray, H. P.: J. Am. Geriatrics Soc. *10*:516 (June) 1962. (4) Hutchison, J. C.: Current Therap. Res. *4*:610 (Dec.) 1962. (5) Feldman, L. H.: North Carolina M. J.: *23*:248 (June) 1962.

SQUIBB
Squibb Quality
—the Priceless Ingredient
SQUIBB DIVISION Olin

RAUTRAX®-N RAUWOLFIA SERPENTINA WHOLE ROOT (50 MG.), BENDROFLUMETHIAZIDE (4 MG.) WITH POTASSIUM CHLORIDE (400 MG.), SQUIBB



Notable increase in vigor, strength and sense of well-being

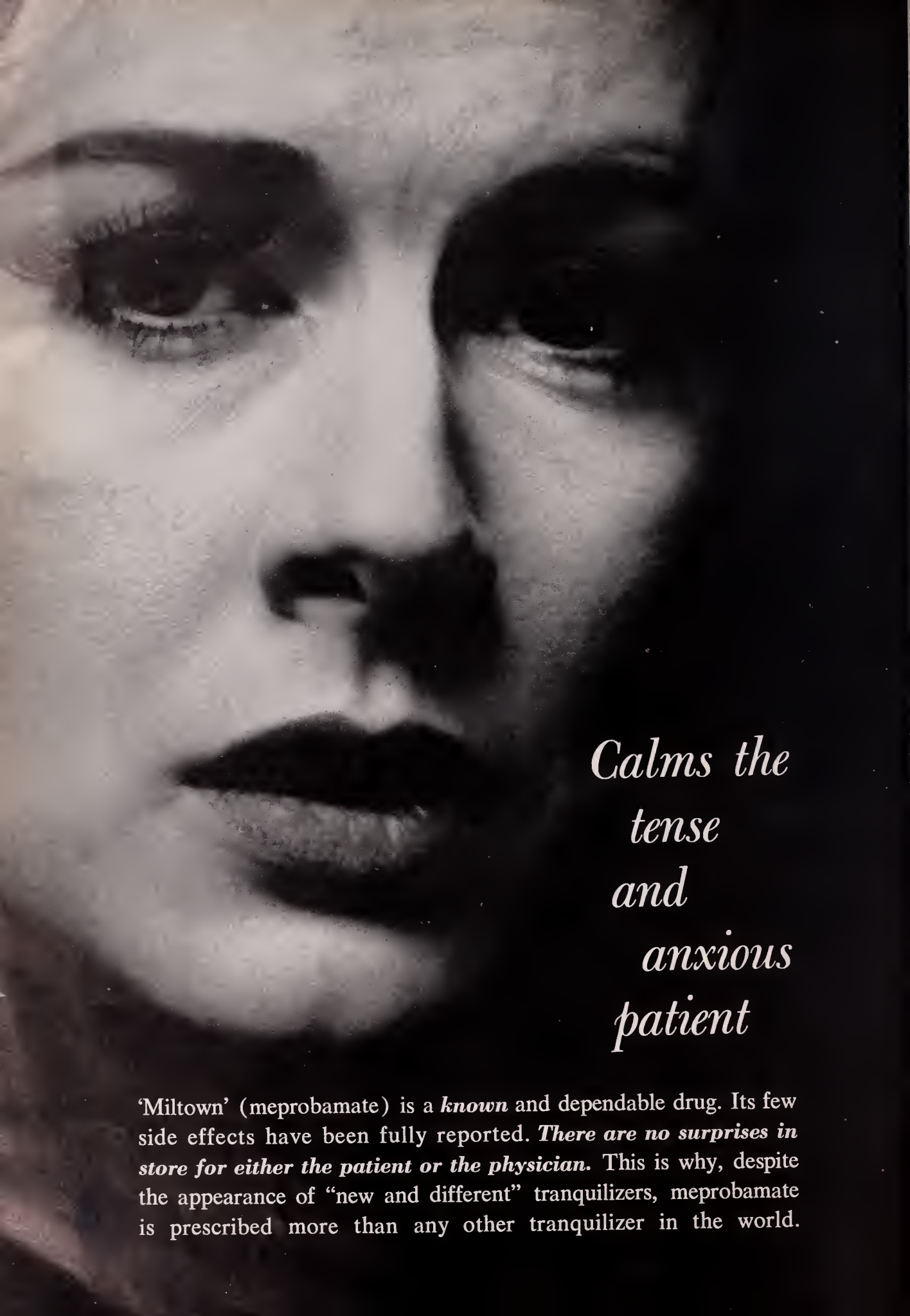
STROL (stanozolol-Winthrop), a heterocyclic steroid, combines nt anabolic effects with outstanding tolerance, stimulates appe- nd promotes weight gain... restores a positive metabolic balance. unteracts the catabolic effects of concomitant corticosteroid or H therapy. WINSTROL (stanozolol-Winthrop) rebuilds body tissue e it builds strength, confidence and a sense of well-being in con- ns associated with excess protein breakdown, insufficient protein e and inadequate nitrogen and mineral retention.

Effects and Precautions: Prolonged administration can produce hirsutism, acne or voice change. In an occasional patient, edema been observed and in young women the menstrual periods have milder and shorter. These side effects are reversible, and pa- s receiving prolonged treatment should be examined and ques- tioned periodically so that, should side effects appear, the dosage may be reduced or administration of the drug discontinued for a time. In patients with impaired cardiac and renal function, there is the pos- sibility of sodium and water retention. Liver function tests may revea an increase in bromsulphalein retention, particularly in elderly pa- tients. In such cases, therapy should be discontinued. Although it has been used in patients with cancer of the prostate, its mild androgenic activity is considered by some investigators to be a contraindication.

Dosage: Usual adult dose, 1 tablet t.i.d. before or with meals; young women, 1 tablet b.i.d.; children (school age): up to 1 tablet t.i.d.; chil- dren (pre-school age): ½ tablet b.i.d. Available as scored tablets of 2 mg. in bottles of 100. For best results, administer with a high protein diet.

WINTHROP LABORATORIES, NEW YORK 18, N. Y.

arked improvement in appetite / Measurable weight gain Winthrop



'Miltown' (meprobamate) is a ***known*** and dependable drug. Its few side effects have been fully reported. ***There are no surprises in store for either the patient or the physician.*** This is why, despite the appearance of "new and different" tranquilizers, meprobamate is prescribed more than any other tranquilizer in the world.

Clinically Proven

in more than 750 published clinical studies and over eight years of clinical use

Outstanding Record of Effectiveness and Safety

1. Relieves anxiety and anxious depression in a broad spectrum of clinical conditions.
2. Doesn't leave patients "too groggy" to work or think or learn.
3. Relaxes both mind and skeletal muscle. Relieves physical tension as well as emotional stress.

Slight drowsiness may occur with meprobamate and, rarely, allergic reactions. Meprobamate may increase effects of excessive alcohol. Use with care in patients with suicidal tendencies. Massive overdosage may produce coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Withdraw gradually after prolonged use at high dosage.

Usual dosage: 1 or 2 400 mg. tablets t.i.d.

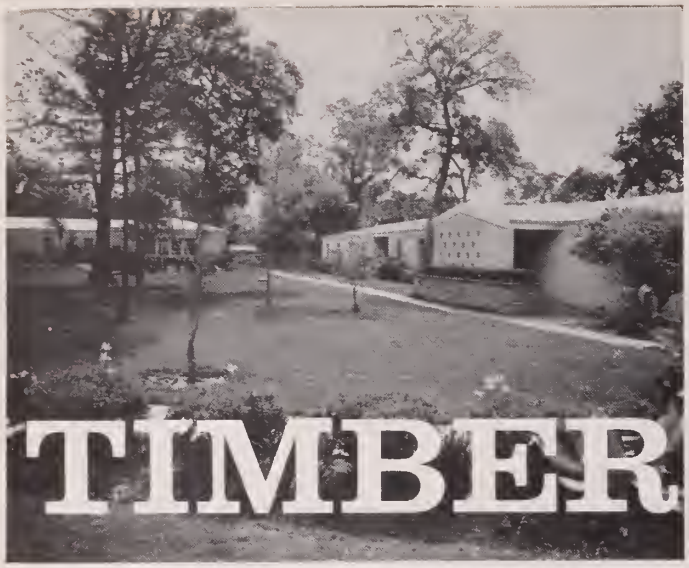
Supplied: 400 mg. scored tablets, 200 mg. sugar-coated tablets; bottles of 50.

the original meprobamate

Miltown®

WALLACE LABORATORIES / *Cranbury, N.J.*

CH-9235



PSYCHIATRIC HOSPITAL

DAY HOSPITAL

DEPARTMENT OF OUT PATIENT PSYCHIATRY

TIMBERLAWN FOUNDATION
For Education and Research in Psychiatry

Narcotic Cases Not Admitted

TIMBERLAWN
PSYCHIATRIC CENTER

PERRY C. TALKINGTON, M.D.
Psychiatrist In Chief

CHARLES L. BLOSS, M.D.
Medical Director

HOWARD M. BURKETT, M.D.
Clinical Director

DONALD BERTOCH, M.A.
DAVID LIPSHER, Ph.D.
JEAN HUBBARD, B.S.
Clinical Psychology

Associate Psychiatrists
JAMES K. PEDEN, M.D.
WARD G. DIXON, M.D.
JERRY M. LEWIS, M.D.
CLAUDE L. JACKSON, M.D.
E. CLAY GRIFFITH, M.D.
BELVIN A. SIMMONS, M.D.
ALBERT F. RIEDEL, M.D.
JOHN HENRY REITMAN, M.D.

Business Manager
RALPH M. BARNETTE, JR., B.B.A.

BILL M. TURNAGE, M.S.S.W.
ROBERT L. COATES, M.S.S.W.
WELDON EBELING, M.S.S.W.
Social Work

GERALDINE SKINNER, B.S., O.T.R.
Director of Occupational Therapy

LOIS TIMMINS, Ed.D.
Director of Recreational Therapy

FRANCES LUMPKIN, R.N., B.S.
Director of Nurses

EVergreen 1-2121 Dallas 21, Texas P. O. Box 1769

One out of three *who died of cancer*
last year ***could have been saved!***



To alert the practicing physician to suspect and diagnose cancer early—the American Cancer Society has available for you a film series of Physicians' Conferences on Cancer.

*Kinescopes of live, color, closed-circuit television programs, on early diagnosis and treatment of cancer, present outstanding clinicians.

These 24 film programs—the nucleus of a course on cancer for the General Practitioner—cover virtually all cancer sites and types. They center around panel discussions, laboratory techniques, case histories, x-ray findings, histopathology, statistical data, and operative procedures.

Professional Films and services available to the doctor in his own community may be obtained through your Division of the

American Cancer Society

* APPROVED BY THE AMERICAN ACADEMY OF GENERAL PRACTICE FOR INFORMAL STUDY CREDIT (16 MM COLOR SOUND FILMS. RUNNING TIME 30-50 MINUTES)

AMERICAN CANCER SOCIETY, Louisiana Division, Inc., 822 Perdido Street, New Orleans 12, La.



vacancy

"The direct cost for caring for the mentally ill is $1,7 billion a year. Workers who become mentally ill lose over half a billion dollars in earnings each year.

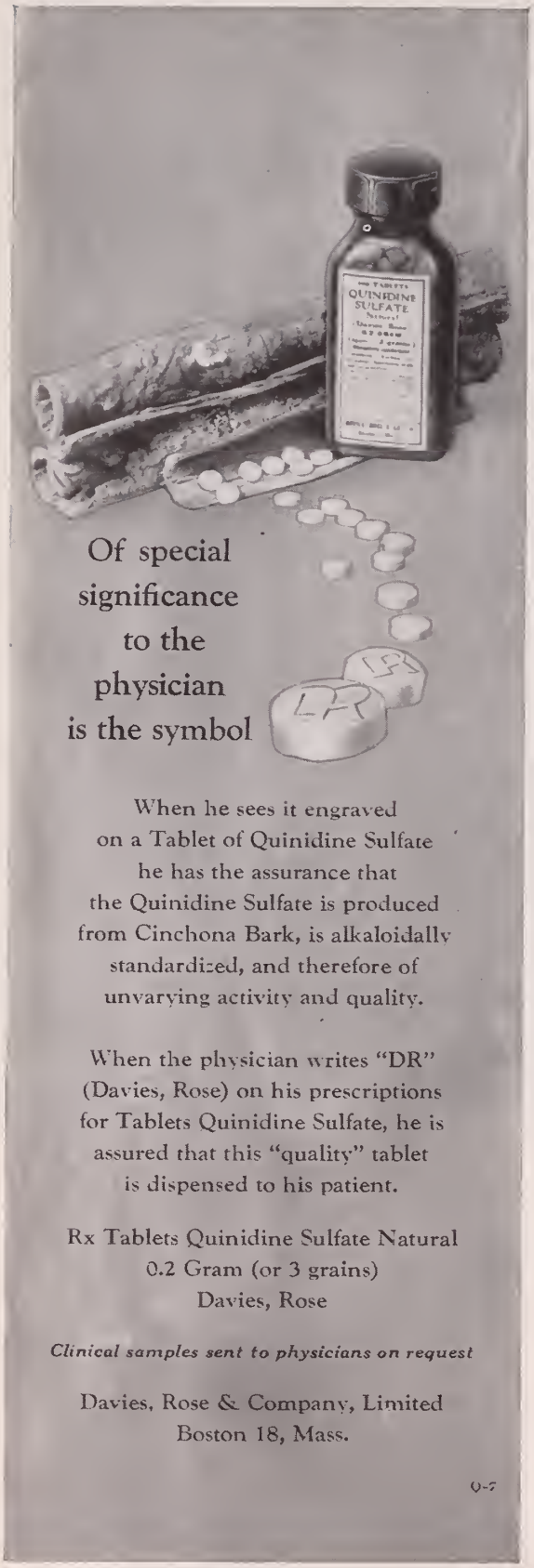
*Staff in one mental hospital recently tried an experiment with 65 patients who had been confined for an average of 13 years. They practiced the best treatment methods now known and, within six months to a year, 37 of these patients were well enough to be discharged. Only eight of the discharged patients failed to hold the gains they had made for at least a year after they left the hospital."**

Hope now, where there was no hope. Drugs which help now, where there were no known drugs which helped—even five years ago. Independent drug research is continuing in this vital area. But, should it be discontinued because the cost must somehow be reflected in the ultimate price of the new drug—if it is to be discovered? Or should the sign read, as it has throughout time in overcrowded mental institutions: "NO VACANCIES."

*U.S. Department of Health, Education and Welfare, Public Health Service Publication No. 813.

This message is brought to you on behalf of the producers of prescription products.

PHARMACEUTICAL MANUFACTURERS ASSOCIATION • 1411 K STREET, N.W. • WASHINGTON, D.C.



Of special significance to the physician is the symbol

When he sees it engraved on a Tablet of Quinidine Sulfate he has the assurance that the Quinidine Sulfate is produced from Cinchona Bark, is alkaloidally standardized, and therefore of unvarying activity and quality.

When the physician writes "DR" (Davies, Rose) on his prescriptions for Tablets Quinidine Sulfate, he is assured that this "quality" tablet is dispensed to his patient.

Rx Tablets Quinidine Sulfate Natural
0.2 Gram (or 3 grains)
Davies, Rose

Clinical samples sent to physicians on request

Davies, Rose & Company, Limited
Boston 18, Mass.

0-7

INDEX TO ADVERTISERS

Ames Company, Inc. 14

Browne-McHardy Clinics 20
Burroughs Wellcome & Co. 12, 24

Chatham Pharmaceuticals, Inc. 25

Davies, Rose & Co., Ltd. 36
Dorsey Laboratories 18

Endo Laboratories 11

Glenbrook Laboratories 7, 28

Katz & Besthoff, Ltd. 1

Lederle Laboratories 9, 22, 23
Lilly & Company, Eli Front Cover, 16
Louisiana Coca-Cola Bottling Co. 1
Louisiana State Board of Health Second & Third Covers

Majors Company, J. A. 1

Parke, Davis & Company 4, 5
Peacock Surgical Co., Inc. 20
Pharmaceutical Manufacturers Association 35
Poythress & Company, Inc., Wm. P. 6
Professional Cards 37, 38
Professional Management Service 10

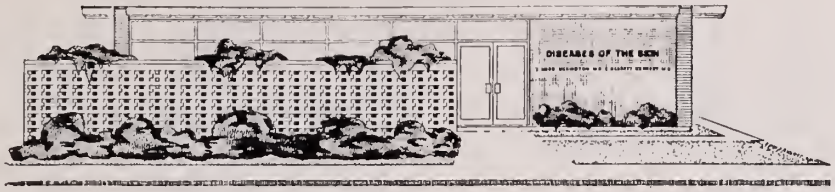
Robins Co., Inc., A. H. 3
Roche Laboratories Back Cover

Schering Corporation 15
Searle & Company, G. D. 17
Smith Kline & French Laboratories 29
Squibb & Sons, E.R. 30

Timberlawn Psychiatric Center 34

Wallace Laboratories 8, 13, 21, 25, 26, 27, 32, 33
Winthrop Laboratories 2, 19, 31

PROFESSIONAL CARDS



Courtesy Parking

Adjacent to Building

BARRETT KENNEDY, M. D.

V. MEDD HENINGTON, M. D.

WM. J. PERRET, M. D.
(Associate)

DERMATOLOGY

4522 MAGNOLIA STREET

TWinbrook 1-4452 — 1-4453

Green Clinic

709 South Vienna Street — Ruston, Louisiana

Surgery
Marvin T. Green, M.D.
LaMoyne C. Bleich, M.D.

Obstetrics and Gynecology
Carl L. Langford, M.D.
David M. Hall, M.D.

Pediatrics
Bruce W. Everist, M.D.
O. Wharton Brown, Jr., M.D.

Eye, Ear, Nose and Throat
Harold H. Harms, M.D.

Radiology
M. Ragan Green, M. D.

Internal Medicine
Henry S. Roane, M.D.
Robert W. Sharp, M.D.
Joe L. Smith, Jr., M.D.

Dentistry
L. Felton Green, D.D.S.
Benjamin C. Baugh, D.D.

The Baton Rouge Clinic

134 North 19th St. — DI 8-5361

SURGERY
J. Sabatier, M. D.
Charles Mosely, M. D.
Charles S. Peter, Jr., M. D.

GYNECOLOGY & OBSTETRICS
Melvin Schudmak, M. D.
J. P. Griffon, M. D.
Donald C. Diefendorf, M. D.

UROLOGY
Mortimer Silvey, M. D.

GENERAL PRACTICE
Shirley J. Woodford, M. D.

INTERNAL MEDICINE
Charles Prosser, M. D.
Roger Reynolds, M. D.
(Allergy)
Bruce L. Baer, M. D.
(Gastroenterology)
Douglas Gordon, M. D.
(Endocrinology)
David D. Kahn, M. D.
(Hematology)

EYE
George H. Jones, M. D.

PHILIP RONALD LORIA, M. D.

DISEASES OF THE SKIN

Dermoplaning — **Removal of Excessive Hair**

1104 Maison Blanche Bldg. — New Orleans 16, La.
By Appointment — 524-9621

PROFESSIONAL CARDS

JOHN C. HARDIN, JR.
D.D.S., M.D., F.A.C.S.
Maxillo-Facial & Oral Surgery
(Head and Neck Surgery)
121 Physicians & Surgeons Bldg., West
Phone 3-6901 Shreveport, Louisiana

DR. NATHAN H. POLMER
Physical Medicine—Rehabilitation
2209 Carondelet St.
2 - 5 P. M.
Off.: JA 2-0171 Res.: JA 2-3946

JAMES W. BURKS, JR., M. D.
DISEASES OF THE SKIN
SURGICAL PLANING FOR COSMETIC DEFECTS
FACILITIES FOR REMOVAL OF SUPERFLUOUS HAIR
925 Maison Blanche Bldg.
New Orleans 16, La. 529-3322

DR. R. ROSS, JR.
SKIN DISEASES
802 Pere Marquette Bldg. JA 2-0202

DR. RICHARD W. VINCENT
PLASTIC AND RECONSTRUCTIVE SURGERY
34 Maes Court — Medical Plaza
3600 PRYTANIA STREET
TWinbrook 5-4561

JUSTILLIEN H. FORET, M. D.
Practice Limited to Psychiatry
3706 Prytania Street
899-2618 By Appointment

CHARLES I. BLACK, M. D.
DISEASES OF THE SKIN
4550 North Boulevard DIckens 3-2841
Baton Rouge, Louisiana

Business Management Consultants
for Individual Practices, Groups and Clinics
PROFESSIONAL MANAGEMENT SERVICE
700 Maison Blanche Bldg.
524-1177 New Orleans 16, La.

BLAISE SALATICH, D.D.S., M.D.
PRACTICE LIMITED TO ORTHOPEDIC SURGERY
1212 Maison Blanche Building
JAckson 2-7697 By Appointment

THE OWENS CLINIC
for
PLASTIC AND RECONSTRUCTIVE SURGERY
2223 Carondelet St. New Orleans 13, La.
Telephone: JAckson 2-0106
After Hours — Call Doctors' Exchange WH 5-4141

DR. HARTWIG M. ADLER
EYE, EAR, NOSE AND THROAT
Hours by appointment.
3439 Prytania Street TW. 1-4094
New Orleans

DR. CARL N. WAHL
Practice limited to
MAXILLO-FACIAL AND PLASTIC SURGERY
4500 Magnolia Street 891-6615

FRANK H. MAREK, M. D.
Radiologist
444 So. Ryan Street Lake Charles, La.
Phone HE 3-6361
Practice Limited to
X-ray and Radium Treatment and Diagnosis

DR. HARRY ZOLLER
HEARING AND DEAFNESS
DISEASES AND SURGERY OF THE EAR
1109 Pere Marquette Building
JA. 5-2535 By Appointment

JOHN H. COUNCE, M. D.
Diseases of the Skin
1413 Delachaise St. New Orleans
Office Hours
By Appointment TW 1-2813

FREDERIC W. BREWER, M. D.
PRACTICE LIMITED TO PSYCHIATRY
1008 Maison Blanche Building
JA 5-4047 By Appointment

The Cancer Commission of the Louisiana State Medical Society



BREAST CANCER will strike one of every twenty women in the United States. At present rates, less than half of them will be cured.

Breast cancer is a disease of immense frustration for the physician...and is one of woman's deepest fears. Yet, for the individual patient, there *is* hope. Five-year cures result in 82% of *localized* cases.

Monthly breast self-examination and annual health checkups are essential in uncovering such cases. Essential, too, is person-to-person exchange between doctor and patient, to give women a chance to resolve their anxieties about this disease...anxieties which paralyze judgment and delay life-saving action.

The Society's newest film, "Breast Self-Examination," has been highly praised by physicians and laymen. A physician is present at each showing so that women may ask questions and be influenced to see their own doctors promptly about any breast problem.

The Society is working intensively on the breast cancer problem, through research and education. Through our concerted efforts...yours, doctor, and ours...we *will* prevail against this great enemy.

AMERICAN CANCER SOCIETY®

LOUISIANA DIVISION, INC.
204 Delta Building New Orleans 12, La.

Louisiana State Board of Health



Formerly nervous and tense, now better able to...

enjoy his children

This, in essence, is what happens when yo place a patient on Librium (chlordiazepox ide HCl). Since this agent generally relieve anxiety and tension without dulling ment clarity or inducing drowsiness, most patien become better able to function normall take an active interest in family and su roundings, meet and solve daily problem This antianxiety agent is virtually free fro extrapyramidal side effects, and does n produce or deepen depression.

Dosage: *Oral*—Usual adult dose in mild to moderate an ety and tension is 5 or 10 mg, 3 or 4 times daily; in seve anxiety and tension, 20 or 25 mg, 3 or 4 times dai *Parenteral*—To control acute conditions, the usual initi adult dose is 50 to 100 mg I.M. or I.V.; not more th 300 mg should be given during a 6-hour period. □ **Si effects:** *Oral*—Drowsiness and ataxia, usually dose-relate have been reported in some patients—particularly t elderly and debilitated. Paradoxical reactions, *i.e.*, excit ment, stimulation, elevation of affect and acute rage, ha been reported in psychiatric patients; these reactions m be secondary to relief of anxiety and should be watche for in the early stages of therapy. Other side effects, us ally dose-related, have included isolated instances minor skin rashes, minor menstrual irregularities, nause constipation, increased and decreased libido. *Parente* —Following parenteral administration some patients m become drowsy or unsteady. The injectable form h occasionally produced mild, transitory fluctuations blood pressure. □ **Precautions:** *Oral*—In elderly, debi tated patients, limit dosage to smallest effective amou to preclude development of ataxia or oversedation (n more than 10 mg per day initially, to be increased grad ally as needed and tolerated). Until the correct maint nance dosage is established, patients receiving this age should be advised against possibly hazardous procedur requiring complete mental alertness or physical coor nation. Caution patients about possible combined effec with alcohol. Caution should be exercised in administe ing Librium (chlordiazepoxide HCl) to addiction-pro individuals. Careful consideration should be given to t pharmacology of any agents to be employed concon tantly—particularly the MAO inhibitors and phenothi zines. Observe usual precautions in impaired renal hepatic function. Periodic blood counts and liver fun tion tests may be advisable in protracted treatme *Parenteral*—Indicated primarily in acute states. Patien receiving this form of therapy should be kept under c servation, preferably in bed, for up to three hours. Amb latory patients should not be permitted to operate vehicle following injection. Reduce dosage when treati patients with impaired renal or hepatic function. T injectable form should not be given to patients in sho or comatose states. Reduced dosage (usually 25 to 50 m should be used for elderly or debilitated patients, a for children.

anxiety and tension relieved
alertness maintained

Librium®
(chlordiazepoxide HCl)

the successor
to the tranquilizers

ROCHE
ROCHE

NAL of the LOUISIANA STATE MEDICAL SOCIETY

LOUISIANA STATE MEDICAL SOCIETY

Formerly NEW ORLEANS MEDICAL and SURGICAL JOURNAL
OFFICIAL ORGAN OF THE LOUISIANA STATE MEDICAL SOCIETY

AUGUST, 1963

Copyright 1963 by
iana State Medical Society.
) per annum, 35¢ per copy

Vol. 115, No. 8

Published monthly by
The Journal of the Louisiana State
Medical Society, Inc.
1430 Tulane Ave., New Orleans 12

Contents

AMPAC 259
M. Vaun Adams, M. D., Mobile, Alabama

Management of Thrombophlebitis and Thrombo-Embolic Phenomena 263
Leonard H. Stander, M. D. and D. V. Cacioppo, M. D., Baton Rouge

The Present Status of Gamma Globulin Therapy for Asthmatic Children 270
Orville C. Thomas, M. D. and John P. McGovern, M. D., Houston, Texas

Some Specific Cardiovascular Abnormalities Amenable to Surgery: Case Reports 273
Walter J. Hollis, M. D., New Orleans



Evaluation of Griseofulvin After Four Years 276
Vincent J. Derbes, M. D. and Lorraine Friedman, Ph.D., New Orleans

Editorial 281

Organization Section 283

Medical News Section 286

Book Reviews 288

Index to Advertisers 30

THE NEW YORK ACADEMY OF MEDICINE
AUG 2 1963
LIBRARY

The Lente Insulins

- wide range of Insulin activity
- free of modifying protein

Additional information available upon request.
Eli Lilly and Company, Indianapolis 6, Indiana.

Lilly

3.00.26

Second Class Mail Privileges Authorized at New Orleans, Louisiana

In the long and colorful history of the Louisiana State Board of Health, the first such board to be established in the United States, 27 Presidents of the Board had served up to June 29, 1963. On that date, which was the beginning of the 109th year of the Board's existence, the 28th President took over the executive reins, namely Dr. James R. Strain of Shreveport. Dr. Strain is a well known pediatrician who is also professionally trained in public health, having received his Masters Degree in public health from Johns Hopkins University in 1954.

True to the ideals and ethics of the medical profession, Dr. Strain has been interested and has participated in the development of community health services needed by the people. He has served as member and chairman of the Caddo Parish Board of Health since 1957. He believes that medical leadership in the planning, development, and operations of preventive community health services is an essential activity of the medical profession. Under this very energetic personality, the State Board of Health will serve the people of Louisiana with its traditionally far-sighted health administration. Dr. Strain will welcome the advice and cooperation of all the medical profession of the State.

LOUISIANA STATE BOARD OF HEALTH



BOTTLED UNDER AUTHORITY OF THE COCA-COLA COMPANY BY
THE LOUISIANA COCA-COLA BOTTLING CO., LTD.



You Know--

that we know!

TRUSTED MANY MILLIONS OF TIMES

GOOD DRUG STORES ONLY THE BEST
Katz & Besthoff, Inc.

Prescription Headquarters Since 1905

It's your professional privilege to replenish your ranks...

Give to medical education through AMA-ERF

AMA-ERF

American Medical Association
Education and Research Foundation
535 N. Dearborn St., Chicago 10, Illinois

MEDICAL BOOKS
Of All Publishers
Any book on Medicine, Surgery, and Nursing

J. A. MAJORS COMPANY

147 South Liberty St.
NEW ORLEANS 12, LA.

——Catalogs cheerfully sent upon request——



NTz Nasal Spray gives prompt, dependable decongestion of the nasal membranes for fast symptomatic relief of hay fever. The first spray shrinks the turbinates, restores nasal ventilation and stops mouth breathing. The second spray, a few minutes later, improves sinus ventilation and drainage. Excessive rhinorrhea is reduced.

NTz Nasal Spray also provides decongestive relief for head colds, perennial rhinitis and sinusitis. Supplied in leakproof, pocket-size, squeeze bottles of 20 ml. and in bottles of 30 ml. with dropper.

NTz® Nasal Spray

NTz is more than a simple vasoconstrictor. It contains [N]eo-Synephrine® HCl 0.5%—the efficacy of which is unexcelled—to shrink nasal membranes and provide inner space; [T]henfadil® HCl 0.1% for topical antiallergic action; and [Z]ephiran® Cl 1:5000 (antibacterial wetting agent) to promote the spread of the decongestant components to less accessible nasal areas.

NTz is well tolerated and does not harm respiratory tissues.

NTz, Neo-Synephrine (brand of phenylephrine), Thenfadil (brand of thenyldiamine) and Zephiran (brand of benzalkonium as chloride, refined), trademarks reg. U. S. Pat. Off. 1795M

Winthrop Winthrop Laboratories
New York 18, N. Y.



Robaxin®
(methocarbamol, Robins)

U.S. pat. no. 2,770,649

ROBAXIN (methocarbamol) relaxes painful skeletal muscle spasm without impairment of normal muscle strength or neuromuscular function.

Side effects, such as lightheadedness, dizziness, drowsiness, and nausea, may occur rarely, but usually disappear when dosage is reduced. Hypersensitivity reactions have been reported infrequently. Contraindicated in patients hypersensitive to the drug.

Average adult dose

	ROBAXIN® (methocarbamol, 500 mg./tab.)	ROBAXIN®-750 (methocarbamol, 750 mg./tab.)
Initially	3 tablets q.i.d.	2 tablets q.i.d.
Maintenance	2 tablets q.i.d.	1 tablet q.4 h. or 2 tablets t.i.d.

A. H. ROBINS CO., INC., Richmond 20, Virginia


There's nothing like a vacation*
for relaxing stress-induced smooth muscle spasm...

Outstanding effectiveness in clinical usage—plus freedom from the risk of serious side effects—are the compelling reasons why DONNATAL has maintained its pre-eminent position as a smooth muscle relaxant through the years.

Over 5 billion doses have been administered since its introduction... impressive evidence of professional confidence in the clinically reported benefits provided by DONNATAL:

excellent results in a wide range of visceral disorders[1-6]
well tolerated[1-6]
convenient dosage forms[1,3]
uniform composition[1,3]
stability[1,3]
economy[1,3]

DONNATAL is indicated in recurring, persistent or chronic visceral spasm, as in: peptic ulcer, pylorospasm, irritable stomach and colon, nervous indigestion, dysmenorrhea, nausea of pregnancy, motion sickness, nocturnal enuresis, mucous colitis and diarrhea.

No serious toxic reactions are to be anticipated. Dryness of the mouth, blurred vision, difficult urination, and flushing and dryness of the skin may occur with excessive and prolonged dosage, but promptly disappear with reduction in dosage.

DONNATAL is contraindicated in acute glaucoma, advanced hepatic or renal disease, and known or suspected idiosyncrasy to any of its components. Patients with incipient glaucoma or urinary bladder neck obstruction must be treated with care, as with any preparation containing a parasympathetic depressant.

REFERENCES: **1.** Barden, F.W., Hill, P.S., Mahaney, W.F., and Cuneo, K.J.: J. Maine M.A. 45:11, 1954. **2.** Chaput, Y., and Baillargeon, J.: L'Union med. du Can. 86:205, 1957. **3.** Hock, C.W.: Clin. Med. 8:1932, 1961. **4.** Kilstein, R.I.: Rev. Gastroenterol. 14:171, 1947. **5.** Marks, L.: Am. J. Gastroenterol. 27:180, 1957. **6.** Wharton, G.K., Balfour, D.C., Jr., and Osmon, K.L.: Postgrad. Med. 21:406, 1957.

Donnatal

Robins

In each Tablet, Capsule or 5 cc. Elixir		In each Extentab
0.1037 mg.	hyoscyamine sulfate	0.3111 mg.
0.0194 mg.	atropine sulfate	0.0582 mg.
0.0065 mg.	hyoscine hydrobromide	0.0195 mg.
16.2 mg. (¼ gr.)	phenobarbital	(¾ gr.) 48.6 mg.

(Warning: May be habit forming)

Prescribed by more physicians than any other antispasmodic—*well over 5 billion doses!*

A. H. ROBINS CO., INC., Richmond 20, Virginia

This one at Spirit Lake, Washington.

Helps the epileptic to realize his potential

DILANTIN®

(DIPHENYLHYDANTOIN SODIUM)

PARKE-DAVIS



"The most effective form of emotional approach remains the demonstration to the patient that the seizure phenomena can be adequately controlled with anticonvulsant medication."[1]

At present, diphenylhydantoin sodium is generally regarded as the standard in anticonvulsant medication because of its effectiveness in controlling grand mal and psychomotor seizures.[2-10] It possesses a wide margin of safety, and incidence of side effects is minimal.[4] With this agent, oversedation is not a problem.[3] Moreover, its use is often accompanied by improvement in the patient's memory, intellectual performance, and emotional stability.[11]

Indications: Grand mal epilepsy and certain other convulsive states.

Precautions: Toxic effects are infrequent: allergic phenomena such as polyarthropathy, fever, skin eruptions, and acute generalized morbilliform eruptions with or without fever. Rarely, dermatitis goes on to exfoliation with hepatitis, and further dosage is contraindicated. Eruptions then usually subside. Though mild and rarely an indication for stopping dosage, gingival hypertrophy, hirsutism, and excessive motor activity are occasionally encountered, especially in children, adolescents, and young adults. During initial treatment, minor side effects may include gastric distress, nausea, weight loss, transient nervousness, sleeplessness, and a feeling of unsteadiness. All usually subside with continued use. Megaloblastic anemia has been reported. Nystagmus may develop. Nystagmus in combination with diplopia and ataxia indicates dosage should be reduced. Periodic examination of the blood is advisable.

DILANTIN Sodium (diphenylhydantoin sodium) is available in several forms including Kapseals,® 0.03 Gm. and 0.1 Gm., bottles of 100 and 1,000.

REFERENCES: (1) Hammill, J. F.: J. Chron. Dis. **8**:448, 1958. (2) Roseman, E.: Neurology **11**:912, 1961. (3) Bray, P. F.: Pediatrics **23**:151, 1959. (4) Chao, D. H.; Druckman, R., & Kellaway, P.: Convulsive Disorders of Children, Philadelphia, W. B. Saunders Company, 1958, p. 120. (5) Crawley, J. W.: M. Clin. North America **42**:317, 1958. (6) Livingston, S.: The Diagnosis and Treatment of Convulsive Disorders in Children, Springfield, Ill., Charles C Thomas, 1954, p. 190. (7) Ibid.: Postgrad. Med. **20**:584, 1956. (8) Merritt, H. H.: Brit. M. J. **1**:666, 1958. (9) Carter, C. H.: Arch. Neurol & Psychiat. **79**:136, 1958. (10) Thomas, M. H., in Green, J. R., & Steelman, H. F.: Epileptic Seizures, Baltimore, The Williams & Wilkins Company, 1956, pp. 37-48. (11) Goodman, L. S., & Gilman, A.: The Pharmacological Basis of Therapeutics, ed. **2**, New York, The Macmillan Company, 1955, p. 187.

14863

PARKE-DAVIS

©PARKE, DAVIS & COMPANY, Detroit 32, Michigan



Lifts depression.



"I feel like my old self again!" Thanks to your balanced therapy with 'Deprol', her depression has lifted and her mood has brightened – while her anxiety and tension have been calmed. She sleeps better, eats better, and normal drive and interest have replaced her emotional fatigue.

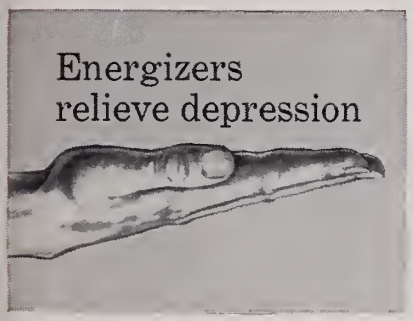
as it calms anxiety

Brightens mood...relaxes tension

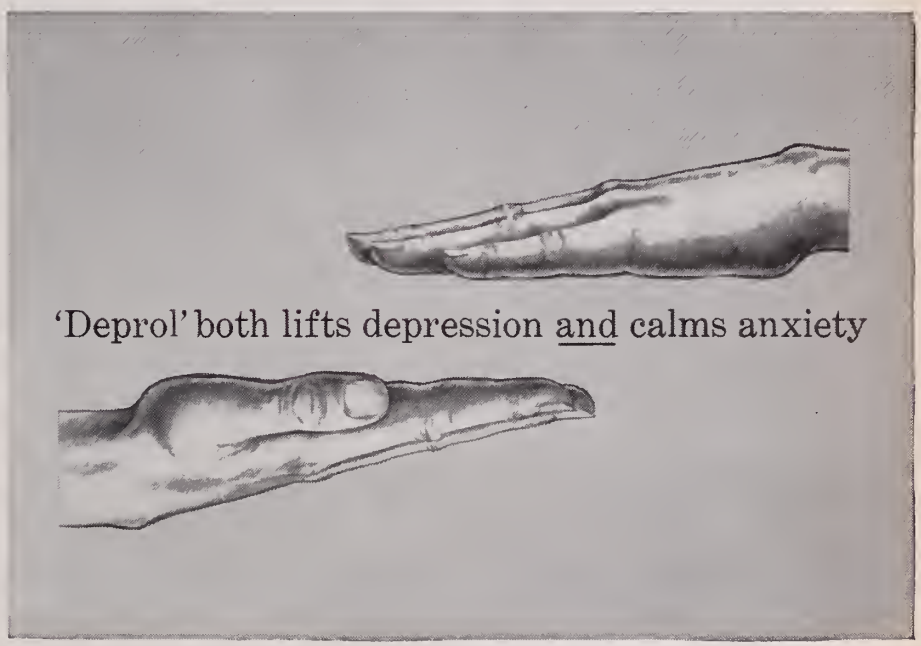
Energizers may stimulate the depressed patient, but they often aggravate anxiety and insomnia. Tranquilizers may help the anxious patient, but they often deepen depression and emotional fatigue.

'Deprol' avoids these "seesaw" effects; it relieves both depression and anxiety. Moreover, it does not cause liver damage, psychotic reactions or changes in sexual function.

Slight drowsiness and, rarely, allergic reactions, due to meprobamate, and occasional dizziness or feeling of depersonalization in higher dosage, due to benactyzine, may occur. Meprobamate may increase effects of excessive alcohol. Use with care in patients with suicidal tendencies. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Withdraw gradually after prolonged use at high dosage.







Usual Dosage: 1 tablet q.i.d. May be increased gradually, as needed, to 3 tablets q.i.d.; with establishment of relief, may be reduced gradually to maintenance levels.

▲Deprol▲®

meprobamate 400 mg.
+ benactyzine 1 mg.

CD-9259

WALLACE LABORATORIES / *Cranbury, N.J.*

PROFESSIONAL MANAGEMENT SERVICE CAN HELP YOU BE A

FULL-TIME DOCTOR



Delegation of time-consuming work not requiring your training and experience releases you to more productive and rewarding work only you can do. The Professional Management Service is equipped to save you time . . . to relieve you and your staff of both menial and critical business tasks . . . and to increase your income. Our service offers you the benefits of specially trained, and equipped personnel under the careful supervision of specialists in medical business management, however you maintain complete control of your business activities!

We Offer These Services -

ACCOUNTS RECEIVABLE MANAGEMENT Professional Management Service trained bookkeepers, electric equipment and modern, proven-in-use methods designed to the needs of medical accounts are used to minimize the business workload in your office. Professional, accurate, itemized statements encourage prompt payment. This service pays big dividends in good will, time savings and net dollar return.

CONSULTATION Professional Management Service also includes special services, as needed, such as counseling on all insurance, investments, office personnel, fees, office lay-out, etc.

BASIC BOOKKEEPING SERVICE Formal accounting records are maintained by Professional Management Service. This includes income and expenses, depreciation, capital accounts, monthly financial report and tax return preparation.

PRE-COLLECTION PROGRAM A constructve approach to slow-paying accounts, subject to your control, this service is used with the ARM Service, above, or to supplement billing by your own staff. Custom designed to your needs and policies, but all time-consuming work is done by Professional Management Service.

COMPREHENSIVE BUSINESS SERVICE Most beneficial to physicians is the assumption of the complete business side of practice by the Professional Management Service in a co-ordinated, comprehensive service encompassing all functions named above.



PROFESSIONAL MANAGEMENT SERVICE

New Orleans, Louisiana

700 MAISON BLANCHE BLDG., PHONE 524 1177

A Specialized Service . . . Exclusively Professional

AIDS TO:

Diagnosis
Examination
Treatment

New (11th) Edition!
Beeson & McDermott—Cecil-Loeb
TEXTBOOK OF MEDICINE

A new and distinguisbed team of Editors guides this well-known textbook in its *New (11th) Edition.* It provides precise and thorough descriptions of all those disease entities you are likely to encounter—over 800 in all. Each is discussed fully and completely: *etiology, epidemiology; morbid anatomy; pathologic physiology; symptoms; diagnosis; prognosis; therapy.* Contents range from a commentary on *Patient-Physician Communication* to *Management of Bronchopulmonary Insufficiency.* In tbis revision you'll find increased emphasis on pathologic physiology; a new section on *Genetic Diseases;* expansion of the material on *Viral Diseases;* reorganization and augmentation of sections on *Bronchopulmonary Disease* and *Gastroenterology;* a brilliant discussion of *Nucleic Acids, Genes, Viruses, and Immunity;* 67 new contributors. *The text is available either as a single volume or a two-volume set.*

Edited by PAUL B. BEESON, M.D., Ensign Professor of Medicine, Yale University School of Medicine; and WALSH McDERMOTT, M.D., Livingston Farrand, Professor of Public Health, Cornell University Medical College. With contributions by 173 anthorities. With the assistance of 5 Associate Editors: ALEXANDER G. BEARN, PHILIP K. BONDY, CARL V. MOORE, MARVIN H. SLEISENGER, the late HAROLD G. WOLFF. 1895 pages, 7⅜″ x 10¾″, with 238 illustrations. Single volume, $19.50. Two-volume set, $23.50. *New (11th) Edition—Just Published!*

New (2nd) Edition!
Mayo Clinic—CLINICAL EXAMINATIONS IN NEUROLOGY

Here are the proved, successful techniques used at tbe Mayo Clinic in the neurologic examination. The book is written in concise, practical form—a series of working blueprints. Tbe authors carefully guide the reader in developing his mastery of tbe clinically useful techniques in tbis important area of practice. You'll find effective techniques for taking the neurologic bistory, and reproductions of the various forms the Mayo Clinic staff developed for recording the history and the results of the clinical examination. They give you their order of procedure, their techniques of examination of the cranial nerves, motor function, reflexes. mental function, autonomic function. specific methods of examination for use in the sensory examination, etc. For this up-dated *New (2nd) Edition* the information in all chapters was brought up-to-the-minute. The problems of performing neurological examinations on infants are delineated in a full chapter, and a new chapter is devoted to roentgenographic techniques. You'll find a full measure of practical help in this up-to-date volume.

By Members of the Sections of Neurology and Section of Physiology, Mayo Clinic and Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota, Rochester, Minnesota. 396 pages, 6⅛″ x 9¼″, illustrated. About $9.00. *New (2nd) Edition—Just Ready!*

Three new EDITIONS from SAUNDERS

New (2nd) Edition!
Graham—THE CYTOLOGIC DIAGNOSIS OF CANCER

Tbis valuable manual (formerly under auspices of the Vincent Memorial Laboratory) discusses the fundamentals, potentials and limitations of cytologic diagnosis of cancer—plus detailed, autboritative guidance on preparation and interpretation of cytologic smears. Material is based on study of *tens of thousands of cases.* Vaginal smears, smears of sputum or bronchial aspirations, urine sediment, gastric secretion and tbe sediment of serous fluid are all covered. Eacb chapter begins with an illustration and discussion of a histologic section of a particular tissue. This is followed by: (a) lower-power photomicrograph of a field of classical desquamated cells derived from tbat epitbelium; (b) a higher-power pbotomicrograph of tbe same; (c) a colored drawing. In tbis *New (2nd) Edition* tbe cytological picture of dysplasia of the uterine cervix, tbe cytology of esophageal cancer, the cytology of needle aspirations of solid masses, and the cellular aberrations present in pernicious anemia are discussed in separate cbapters. Tbe material on histiocytes in vaginal secretion, and tbe chapter on adenocarcinoma of the uterine corpus are rewritten. Other valuable new chapters cover: the confirmation of unexpected positive reports; tbe reporting of smears; the identification of cells.

By RUTH M. GRAHAM, Sc.D. (Hon.), Roswell Park Memorial Institute, Buffalo. 387 pages, 6⅜″ x 9¾″, with 992 illustrations on 311 figures. 32 color plates. About $13.50. *New (2nd) Edition—Just Ready!*

To Order Mail Coupon Below!

W. B. SAUNDERS COMPANY

West Washington Square Philadelphia 5

Please send and bill me:

☐ Beeson & McDermott—Cecil-Loeb *Medicine* . . . 2 vol. set.....$23.50

☐ Single Volume form.....$19.50

☐ Graham—*Cytologic Diagnosis of Cancer*.....About $13.50

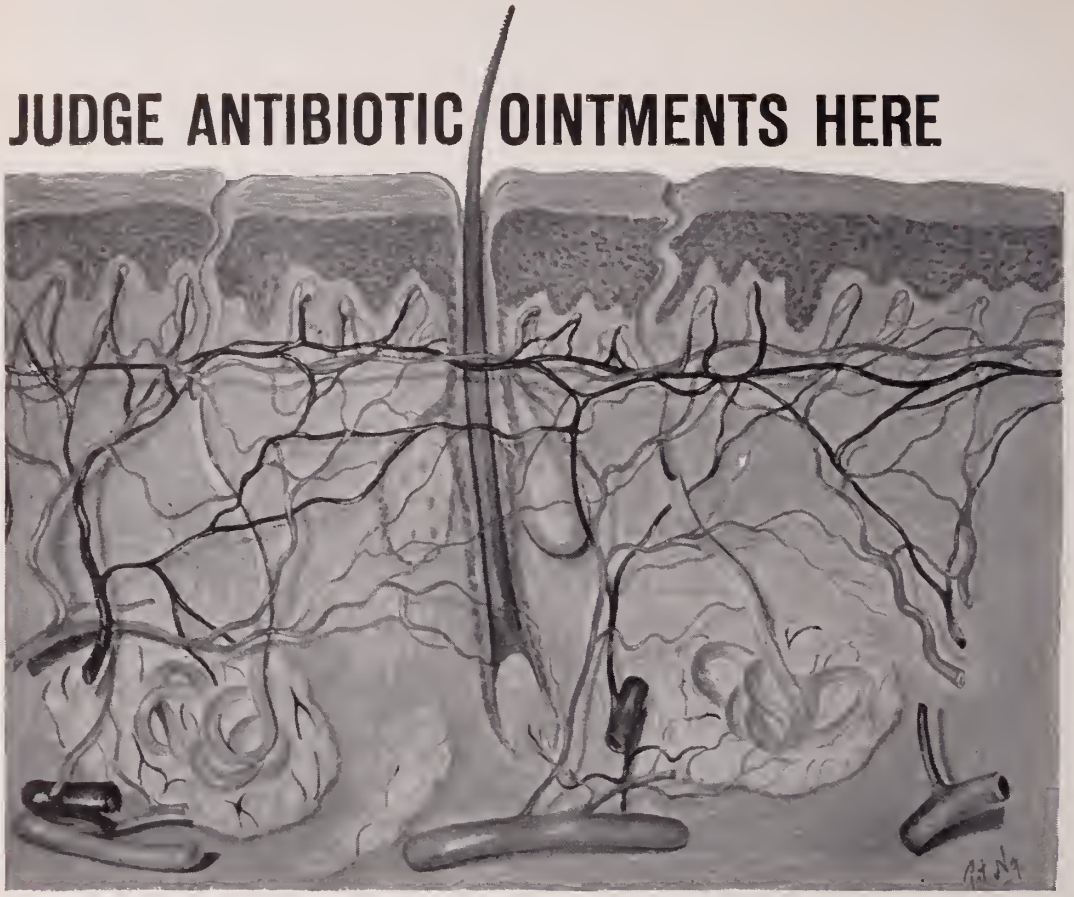
☐ Mayo Clinic—*Clinical Examinations in Neurology*.....About $9.00

Name.....

Address.....

SJG 8-63

JUDGE ANTIBIOTIC OINTMENTS HERE



Results on skin are final proof of any topical antibiotic's effectiveness

No in vitro test can duplicate a clinical situation on living skin. 'Neosporin' (polymyxin B—bacitracin—neomycin) Antibiotic Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and rarely sensitizes.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs.

Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.

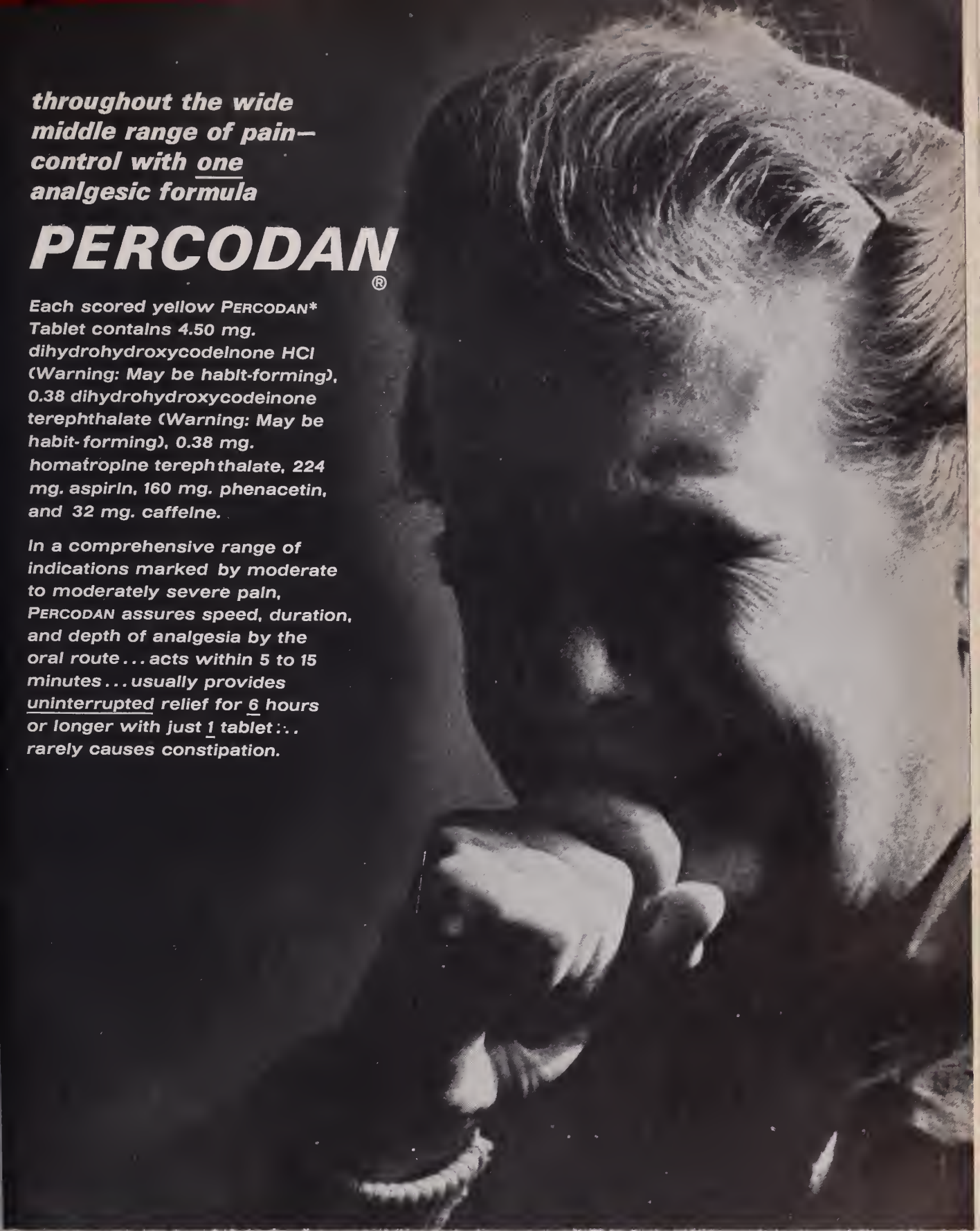
Complete literature available on request from Professional Services Dept. PML.

'NEOSPORIN'®

brand

POLYMYXIN B-BACITRACIN-NEOMYCIN ANTIBIOTIC OINTMENT

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.



throughout the wide middle range of pain— control with one analgesic formula

PERCODAN®

Each scored yellow PERCODAN* *Tablet contains 4.50 mg. dihydrohydroxycodeinone HCl (Warning: May be habit-forming), 0.38 dihydrohydroxycodeinone terephthalate (Warning: May be habit-forming), 0.38 mg. homatropine terephthalate, 224 mg. aspirin, 160 mg. phenacetin, and 32 mg. caffeine.*

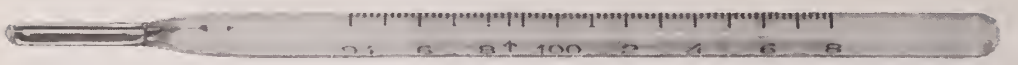
In a comprehensive range of indications marked by moderate to moderately severe pain, PERCODAN *assures speed, duration, and depth of analgesia by the oral route . . . acts within 5 to 15 minutes . . . usually provides uninterrupted relief for 6 hours or longer with just 1 tablet . . . rarely causes constipation.*

Average Adult Dose—1 tablet every 6 hours. **Side Effects and Contraindications**—Although generally well tolerated, PERCODAN may cause nausea, emesis, or constipation in some patients. PERCODAN should be used with caution in patients with known idiosyncrasies to aspirin or phenacetin, and in those with blood dyscrasias. **Also available:** PERCODAN®-DEMI, containing the complete PERCODAN formula but with only half the amount of salts of dihydrohydroxycodeinone and homatropine. Both products are on oral Rx in all states where laws permit. Narcotic order required. **Literature on request.** ENDO LABORATORIES Richmond Hill 18, New York

Endo®

*U. S. Pats. 2,628,185 and 2,907,768

one answer... three minutes





three answers ...ten seconds

DIP AND READ

combistix®

urine protein • glucose • pH

BASIC COMBINATION TEST FOR BEDSIDE AND OFFICE

... faster than taking temperature. Detects glucosuria (as in diabetes), proteinuria (as in renal disorder), abnormal pH (as in calcinosis or GU infection). For routine screening of all patients.
COMBISTIX—*basic as the stethoscope.*
AMES products are available through your regular supplier. 38263

AMES
COMPANY INC
Elkhart • Indiana
Toronto • Canada



in arthritis: vitamins are therapy

In dealing with the chronic stress of arthritis the physician often faces the problem of nutritional imbalance. High potency B and C supplementation is needed for rapid replenishment of tissue stores of these water-soluble vitamins. STRESSCAPS meet this need and help support the natural metabolic defenses in the disease.

FOR PROFESSIONAL

RECOMMENDATION ONLY

Each capsule contains: Vitamin B_1 (Thiamine Mononitrate)...10 mg. / Vitamin B_2 (Riboflavin)...10 mg. / Niacinamide... 100 mg. / Vitamin C (Ascorbic Acid)...300 mg. / Vitamin B_6 (Pyridoxine HCl)...2 mg. / Vitamin B_{12} Crystalline... 4 mcgm. / Calcium Pantothenate...20 mg. Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100.

Lederle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.

6318-3

STRESSCAPS®

Stress Formula Vitamins Lederle

WILLIAM B. TERHUNE, M. D.

THE SILVER HILL FOUNDATION

New Canaan Connecticut

ANNOUNCES:

Appointment available for Senior Associate. Board Certified in Psychiatry to join our Group in the active practice of psychiatry. The Silver Hill Foundation is a psychotherapeutic unit for the treatment of the functional nervous disorders. The setting is that of a comfortable country home where a limited number of patients are under intensive, re-educational treatment for a period of several weeks.

Ideal work conditions, scientific freedom and guaranteed income. Only well qualified physician, capable of advancement should APPLY TO: Dr. William B. Terhune, Medical Director, New Canaan, Connecticut.

Associates: Dr. Marvin G. Pearce, Dr. Robert B. Hiden, Dr. William M. White, Dr. William D. Wheat, Dr. Warren A. Mann, Dr. Morgan F. Moore

At home or traveling . . .
effective management of
• AMEBIC DYSENTERY
• SIMPLE DIARRHEA

YODOXIN®
DIIODOHYDROXYQUIN U.S.P.



. . . THE DRUG OF CHOICE IN AMEBIC DYSENTERY
. . . FOUND EFFECTIVE IN THE MANAGEMENT OF NONSPECIFIC DIARRHEA
. . . LOW TOXICITY OF THIS DRUG COMPARED TO OTHER AMEBACIDES GIVES OUTSTANDING ADVANTAGES IN THESE ENTITIES

SUGGESTED DOSAGE:

AMEBIC DYSENTERY: Adults take 3 tablets t.i.d. after meals. This is continued for 20 days.

NONSPECIFIC ENTERITIS AND SIMPLE DIARRHEA: At first discomfort one tablet, another tablet two hours later. Repeat next day if diarrhea persists.

Chills, fever, rash, erythema and in rare cases furunculosis have been reported. Iodine containing compounds are contraindicated in patients with liver damage or known drug sensitivity.

For adequate use data please request and consult our product literature

GLENWOOD LABORATORIES, Inc., TENAFLY, N. J.



In Sprains, Strains and Muscle Spasm, 'Soma' Compound

numbs the pain...not the patient

A potent analgesic and a superior muscle relaxant

1. A sprain or fracture is not a big clinical problem—but it does hurt. And if there is housework to do and kids to mind, the patient needs something to numb the pain.

2. A.P.C. compounds have limited usefulness; and the patient can buy them without your prescription. Unfortunately, most of them are too mild to be effective for sprains—and more potent products too often make the patient feel 'dopey'.

3. 'Soma' Compound is ideal in these cases. Since it contains both 'Soma' (carisoprodol) and acetophenetidin it is both a potent analgesic and a superior muscle relaxant; it also contains caffeine to offset any drowsiness *("numbs the pain...not the patient").*

4. Why not try 'Soma' Compound? Dosage is 1 or 2 tablets q.i.d. For more severe pain, try 'Soma' Compound + Codeine. Dosage: 1 or 2 tablets q.i.d.

5. Hypersensitivity to carisoprodol may occur rarely. Codeine may produce addiction, nausea, vomiting, constipation or miosis.

Soma® Compound

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg.

Soma® Compound + Codeine

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg., codeine phosphate 16 mg. (Warning—may be habit forming.)

®WALLACE LABORATORIES / *Cranbury, N.J.*

CSO-9193



We like visitors. We like to show them our modern equipment and latest research facilities, our exacting manufacturing techniques and unexcelled quality standards. Up to a point, that is. A white line provides the barrier that discourages further exploration. It means look but don't cross. It is a safeguard against inadvertent mishandling or misplacing of products—another precaution in an endless list of rules contributing immeasurably to the quality of the finished product.

Eli Lilly and Company • Indianapolis 6, Indiana, U.S.A.

Lilly

390178

The Journal

of the

Louisiana State Medical Society

$4.00 Per Annum, 35c Per Copy
Vol. 115, No. 8

AUGUST, 1963

Published Monthly
1430 Tulane Avenue, New Orleans 12, La.

AMPAC*

• The workings of AMPAC are explained together with the manner in which the various state PACS function.

M. VAUN ADAMS, M. D.
Mobile

MR. President, Members of the Louisiana House of Delegates, and Invited Guests:

I am indeed grateful for the invitation to speak before you today on the American Medical Political Action Committee—otherwise known as AMPAC and your state PAC known as LAMPAC.

Formation

Because there may possibly be some who are not duly acquainted with the facts of how AMPAC was started, how it works, and what it accomplished last year, and how it intends to proceed, I will begin by saying that AMPAC is the brainchild of the American Medical Association, (and that the AMA—at least in matters political — believes strongly in planned parenthood).

The decision to form AMPAC was not taken hastily. To the contrary, the AMA and its appropriate committees decided to form AMPAC only after thorough study, prolonged discussion, and a solid review of past experience dating from the late 1940's. Approval became official in 1961, and our first Board meeting took place that October.

Why was AMPAC formed? Because, AMPAC was badly needed. The AMA was conducting an effective legislative and lobbying program at the Federal level. Our state and county medical societies were doing the same job at the state and municipal levels. Medicine's leadership soon recognized, however, that something was missing. That something was political education and candidate support.

Reason for Existence

Politicians are realists. It was realistic of them to ask:

"Why do you seek our support in your time of legislative crisis and turn away from us in our time of political crisis? Where are you when Congress adjourns and the campaign begins?"

It is sad but true that an officeholder's political principles are sometimes modified when political extinction confronts him at the polls.

Under the law, however, the AMA could do nothing to support the candidates of its members' choice—either financially or otherwise.

Under the law AMPAC could support candidates if it raised money through voluntary contributions of physicians, their wives, and others.

AMPAC had another vitally important

* Presented before Eighty-third Meeting of the House of Delegates of the Louisiana State Medical Society, New Orleans, May 1963.

advantage. It can accept and use corporate funds (funds given by any corporation) in a variety of legal ways. For example — the solicitation of membership, which results in membership dollars, can be used for candidate support.

For instance, AMPAC subsists—almost entirely—on corporate dollars. Its membership dollars, (political) or "hard" dollars, as COPE calls them, are reserved for candidate support. I'm sure you know that COPE stands for Committee on Political Education, which is the political action committee of the AFL-CIO.

Operating Methods

Thus, the medical profession, coordinating its effort through the dual instrumentalities of the AMA and AMPAC, now deals with every segment of the full political spectrum.

We feel that only full spectrum political activity can ever—or will ever—get the job done. We base this upon medicine's limited effectiveness over the past dozen or so years; and upon our heightened effectiveness since AMPAC was formed.

It is unnecessary to give you a detailed case history of AMPAC's organizational growing pains. We had them, of course. Political action begins at the local level and works up. In AMPAC's case, we recognized from the start that the proper function of the national organization was to assist, to guide, and to reinforce all local efforts.

When AMPAC came into being, only eight states had an identifiable political action organization. Today, every state but one has a functioning political action committee. These state PACs are not only functioning, but each is exercising the traditional American right of individuality—each differs from the other. They differ in approach, or structure, or by-laws, or membership dues, but not in purpose. This is the state PAC movement's strength, but it has made our organizational problems measurably tougher.

All medical PACs accept, however, these operating methods:

1. They collect and assess political information and funnel it to AMPAC.

2. They operate on the proved theory that nobody effectively raises money from physicians except—other physicians.

3. They assume responsibility for providing the vast bulk of candidate support funds raised by the medical profession,

Difference Between AMPAC and AMA

AMPAC

1. Is *not* a corporation
2. AMPAC's relationship with state PACs is more of a working alliance. Each state PAC is an independent and autonomous unit.

AMA

1. Is a corporation
2. A federation of component and constituent medical societies—at state and county levels

THEIR STRUCTURES ARE SOMEWHAT SIMILAR

1. National level
2. State Political Action Committees
3. (a) Congressional district organization
 (b) Healing arts committees
 (c) County PAC organizations

1. National level
2. State Medical Society
3. County Medical Societies

DIFFERENCES IN FUNCTION

1. Brings its members Political Education
2. How to work effectively in a precinct
3. How to help a candidate win election
4. How to conduct a registration campaign

AMPAC on the other hand

1. Seeks to elect candidates through co-ordinated effort of politically knowledgeable members
2. Concerned with candidates for election to the 89th Congress

1. Builds a climate of Public opinion at home and in Washington which is favorable or unfavorable to *special legislative activities*

AMA

1. Seeks to present its view on legislation to elected officials through lobbying and other activities
2. AMA concerned with the issues of the 88th Congress

and turn to AMPAC for financial reinforcement only when necessary.

4. They accept the principle that money alone doesn't win elections, and that their individual efforts are also required in behalf of their candidate and his party.

5. They are bipartisan, basing their support upon the candidate's principles and not his party label. But once committed to the candidate's cause they are completely partisan in his behalf.

Because political funds are not easy to come by, the state PACs are extremely careful about spending membership dollars for housekeeping and administrative purposes. Few employ a full-time staff member. But all have shown the capacity to improvise, and in doing so, hoard their membership dollars for use in candidate support.

The state PACs have organized most easily and functioned most effectively, when they have received the unequivocal endorsement of their state and local medical societies. I might add that this, of course, is done within the legal limitations provided by law. (Hatch Act—Federal Corrupt Practices Act.)

1962 Campaign

I would like to tell you about the 1962 campaign.

AMPAC found itself in the midst of the 1962 campaign with many state PACs still in the organizing and agonizing stage. There were two major problems — what candidates to support and how to support them effectively.

First, it was determined to consider the 91 marginal districts—"marginal" meaning that a shift of 5 per cent or less of the vote would change the incumbent. From this beginning, cold hard common sense was applied. It was recognized that there were many different factors involved in determining the electability of a candidate, but nonetheless, the judgments made were based upon as realistic an appraisal as could be made. Considered were such things as the

(1) assessments and intelligence received from our local PACs;
(2) the candidate's position of leadership, present or potential;
(3) the psychological byproducts of his victory or defeat;
(4) his voter appeal;
(5) the adequacy of his political organization;
(6) the caliber of his opponent;
(7) and — the next being basic — the principles for which the candidate stood. There being few sure things in politics anyway, AMPAC chose a few dark horses along with a few solid favorites.

The selections made by AMPAC were strongly influenced by the degree of organizational development achieved by the local PAC, and by the willingness of local physicians and their wives to provide the bulk of the financing necessary for success. These were considered essential requirements for AMPAC participation. Unless they were met, AMPAC stayed away, preferring to use our dollars to better effect elsewhere.

For the most part AMPAC concentrated on races for the House of Representatives —this for the reason that many Senate races were too rich for our blood.

AMPAC supported primary candidates whose principles it endorsed in those districts where primary victory ensures election; and where a clear difference in viewpoint existed between the two or more contenders. Otherwise, we stayed out.

It goes without saying, of course, that we looked for winners in the primary, as well as in the general elections.

At this point, local physicians called on the candidate and offered him financial support as well as volunteer services. What happened next varied, and depended largely upon the candidate's wishes. Regardless of how physicians and their wives served, whether on a healing arts committee or within the candidate's regular organization, medicine rolled up its sleeves and went to work.

Probably five-sixths of the money raised by physicians and their wives to support a certain candidate was money raised at the local level—money raised in addition

to the membership contribution to the state PAC or AMPAC. Many candidates who were not supported financially by the state PAC or AMPAC, were supported at the local level with locally raised funds. Others received local and state PAC, but not AMPAC support. Still others received campaign dollars from all three levels. Financially, state PACs and AMPAC serve only to augment the local fund-raising.

I'm sure you are interested in the results of our maiden voyage. Our candidates won in 70 per cent of the races, compared with COPE's 58.7 per cent success.

Gentlemen, those of us who believe in Constitutional government would do well to ponder these accomplishments of a relatively small handful of men and women.

Suppose that the efforts of those physicians and their wives had been doubled, or tripled—and they can be.

My point is this: organized, cooperating political action groups — each representing a substantial portion of the business and professional community—can, if they go about it right, profoundly influence the Congress that controls their destiny.

Plans

Now a word about our plans for 1964. We now have a listing of the 77 marginal districts, based on 1962 election returns.

We then will proceed to the selection of our target areas for next year. In those target areas we will seek to strengthen our PAC membership; prepare it for knowledgeable, all-out effort in '64; and keep AMPAC's finger on the political pulse of those areas.

We are maintaining and strengthening our liaison with the leaders of both parties—but in terms of politics only, not legislation. Legislation, you will recall is the responsibility of the AMA.

We are preparing a basic political education course with which we will barnstorm the country, and it is called just that—"The Barnstormer." We are continuing to build membership, which means that we are continuing to collect "hard" (political) dollars that can be used for candidate support. Until 1964, we shall—hopefully— try to support ourselves and our programs with corporate funds.

To sum up, AMPAC was created, it is a success, but it must continue to go forward. The movement towards a strong centralized government and the welfare state goes on and on and on. Therefore, it is necessary that AMPAC and your state PAC continue to be successful. It can do this only through your continued cooperation and financial support. Your 1963 membership dollars will help build the firm foundation for a most successful year in 1964.

Your participation in educational workshops and seminars in 1963 will help prepare you to fulfill your civic responsibility as a physician and a citizen. I urge you to make a determined effort to support your LAMPAC and AMPAC. It is extremely important to your profession—will you help yourself?

"The Drug That Wasn't There"

Obviously we must make the investigation of new drugs as safe as possible. At the same time, we must not hamstring the medical research which alone can produce new curative agents for the future, and trials in humans are an essential part of the research process. It should be remembered that the "miracle drugs" produced by the pharmaceutical industry do, in fact, deserve this name and have played a major part toward increasing our life span by ten years in less than a generation. In the years to come "the drug that wasn't there" may bring greater tragedy than the drug which possesses unexpected toxicity.—Editorial in Cincinnati Journal of Medicine, November 1962.

Management of Thrombophlebitis and Thrombo-Embolic Phenomena

• The threat of sudden death, the prolonged morbidity and the crippling sequela make thrombophlebitis one of the most dreaded complications of surgery, injury, parturition, or severe systemic disease.

LEONARD H. STANDER, M. D.
D. V. CACIOPPO, M. D.
Baton Rouge

Introduction

THE purpose of this paper is to review the incidence, management, morbidity and mortality of thrombophlebitis and venous thrombo-embolism in our two local hospitals. After a brief summary of the current literature, certain recommendations will be made. We will discuss prophylactic measures; anticoagulant therapy; inferior vena cava ligation; superficial femoral ligation; thrombectomy; fibrinolytic agents and pulmonary embolectomy.

Historically, thrombophlebitis is a relatively modern disease. It did not exist prior to the Thirteenth Century. The term "milk leg" was first recorded in 1759, by Puzas of France. Charles White, of England, in 1784, published the first complete clinical description of a patient suffering from permanent edema of the leg following pregnancy. The first cases of thrombophlebitis as a postoperative complication were reported in 1894.[9]

Etiology

Allen, Barker and Hines[11] have pointed out that three factors are thought to be responsible for thrombophlebitis, namely, (1) a local, traumatic, infectious, toxic or pre-existing lesion of the intima of the vein; (2) relative stasis of the venous blood flow; (3) change in the composition of the blood itself. Exact relation of these factors singly or in combination is still debatable.

Hobsley and Patey[4] hypothesize that rest in bed produces a tendency toward foot drop or shortening of calf muscles, that resumption of weight bearing strains these muscles producing trauma which may progress to deep vein thrombosis. Until such time that the cause of thrombophlebitis is better understood, the prevention remains only a gesture.

There seems to be some relationship of cancer to thrombophlebitis. This is especially true when thrombophlebitis is spontaneous and migratory. Sproul[1] reviewed 4,258 consecutive autopsies at Presbyterian Hospital in New York City and determined the percentage of multiple thrombi at autopsy in relation to cancer in the most commonly reported sites. She found venous thrombosis in 17 per cent of autopsies in patients with pancreatic carcinoma. In 1961, Lieberman[1] and associates reviewed 1,400 patients with thrombophlebitis and found 81 had cancer. In 31 of these the thrombophlebitis was recognized before the cancer. This brings up the question: In unexplained thrombophlebitis and especially when it is migratory; should an exploratory laparotomy be done? Anlyan and Hart[13] found no significant association between idiopathic venous thrombosis and hidden cancer. The incidence in their cases was not higher than in individuals with other chronic debilitating diseases. No cancer was found in 3 patients upon whom they did exploratory operations.

The incidence of venous thrombosis in children has decreased over recent years. DeCamp, et al[14] in an analysis of 35 cases of acute thrombo-embolism in children demonstrated that some major precipitat-

ing factor, such as, infection, dehydration, malnutrition and circulatory stasis was present. The location was different in that there was only one case of ilio-femoral thrombophlebitis. There were 16 cases involving cerebral veins. In our cases, we collected two patients as young as 14 years. Both will be reviewed in this paper.

We have reviewed 200 cases of thrombophlebitis which have been admitted to our hospitals during the past five years. Twenty-five of these cases involved superficial veins. The sex incidence was about equal. The age incidence is as in Table 1:

TABLE 1
AGE INCIDENCE

Years		Years	
12 to 20	6	51 to 60	50
21 to 30	19	61 to 70	45
31 to 40	23	71 to 80	18
41 to 50	33	81 to 90	6

As you can see from this, the disease is not limited to the older age groups, for 81 (40 per cent) of our cases were in patients below the age of 50.

At times it is difficult to determine a factor which precipitated the development of thrombophlebitis. In 52 of the cases reviewed, no etiological agent could be demonstrated. Precipitating causes can be listed as in Table 2:

The low incidence of phlebitis after normal delivery in this series is interesting.

TABLE 2
PRECIPITATING CAUSES

Cardiac disease		28
Postoperative status		40
Knee surgery	6	
Inguinal hernioplasty	4	
Hysterectomy	4	
Cesarian section	4	
Abdominoperineal resection	3	
Radical mastectomy	3	
Miscellaneous	16	
Varicose veins		22
Trauma to pelvis or extremities		21
Infections on extremities		7
Chronic Metabolic or Collagen Disease		13
Recurrent thrombophlebitis		10
During pregnancy		2
Normal delivery		3
Cancer		1
Burns of extremities		1

Varicose veins most often accounted for superficial thrombophlebitis.

Diagnosis

Pulmonary embolism and even sudden death may be the first evidence of thrombophlebitis. The occult and insidious form has been called phlebothrombosis in contradistinction to thrombophlebitis which has a certain element of inflammation. Supposedly the inflammatory process serves to seal the thrombus to the vein wall and prevents migration of the clot. We believe that it is the tendency today to group both types under the one heading of thrombophlebitis and to recognize that some have more inflammatory element than others.

The symptoms and signs vary with the extent of the disease. Pain in the calf of of leg, swelling of the foot and leg, and pain in the groin are usually present. At times the only evidence may be persistent, low grade, unexplained fever; fleeting attack of dyspnea or sensation of impending disaster.

In the full blown acute ilio-femoral thrombophlebitis there is sudden pain in the groin and upper thigh followed by aching and throbbing in the entire limb. Cyanosis may be present and it varies according to the extent of the clot and position of the limb. The swollen limb usually will be pale, thus, the description of "phlegmasia alba dolens" by early authors. Tenderness will be found over the great vessels in Scarpa's triangle and even above Poupart's ligament.

Acute ilio-femoral thrombophlebitis associated with severe arterial and arteriolar spasm may produce a threat to the viability of the limb. This condition has been described as "phlegmasia caerulea dolens."

A word about superficial thrombophlebitis. We had always believed that superficial thrombophlebitis did not carry the same threat of embolic phenomena that deep thrombophlebitis did. The treatment necessary, we thought, was only that of local treatment. A number of authors including Ternberg,[6] Butcher,[15] Zollinger[3] and others have called attention to the

serious possibilities of this entity. All agree that excision of the involved vein is the best surgical therapy. Zollinger[3] reports 34 of 335 patients with superficial thrombophlebitis had one or more pulmonary emboli and they were fatal in 5 patients.

In the 42 cases of thrombo-embolism in our series two were secondary to superficial thrombophlebitis. One involved the lower extremity and ultimately required inferior vena cava ligation and one with suppurative phlebitis of the cephalic vein of the arm with septic embolism which required ligation and partial excision of the cephalic vein at its junction with the axillary vein.

Management

1. Adequate preoperative preparation with particular attention to electrolytes, blood volume, circulating hemoglobin, hydration, renal function and cardio-pulmonary function.

2. Proper positioning on operating table to avoid mechanical obstruction of leg veins.

3. Early bed exercises and ambulation. Patient should not be allowed to sit in early postoperative periods.

4. Deep breathing exercises for the aspirating effect on the venous pools of the pelvis.

5. Prevent kinking of the pelvic veins by position in bed and no pillows under the knees which slow the venous return in this area.

6. The same principles of care should apply to non-surgical patients who are bed ridden or have limited activity.

7. Certain patients with cardio-pulmonary disease, past history of thrombo-embolic disease or prolonged immobilization can well be treated with anticoagulants prophylactically.

The patients with thrombophlebitis are immediately treated with anticoagulants once the diagnosis is suspected unless there are definite contraindications. Treatment should be continued for one to three weeks after all acute activity of disease has subsided.

Anticoagulant therapy should be started with Heparin and continued with prothrombin depressing drugs as Dicumoral. There is good evidence that Heparin therapy alone is more efficient. However, it is quite difficult to continue Heparin therapy for any length of time due to the frequent clotting time determination needed and the short-lived maximal effect. Heparin therapy consists of giving 50 mg. to 100 mg. intramuscularly or subcutaneously at the onset and every four to six hours. Dosage is regulated according to the clotting time. The maximal effect of the Heparin is reached at the end of one hour and the minimal effect at the end of the third hour. It may also be given continuously intravenously. The total daily dose of Heparin will be between 200 and 400 mg. In some patients the Heparin effect is very labile and difficult to stabilize. Coagulation time should be maintained at two to three times normal.

Dicumoral therapy is started simultaneously with Heparin therapy because it takes approximately forty-eight hours to reduce the prothrombin time to the desired level. The usual dosage of Dicumoral is 300 mg., 200 mg. and 100 mg. on successive days and then regulated according to the daily prothrombin time determination. The prothrombin time should be reduced to and maintained at a level of 20 to 30 per cent of normal. When this has been achieved, the Heparin therapy can be discontinued.

Contraindications to anticoagulant therapy are: (1) catheter in place after a prostatectomy, (2) gastrointestinal hemorrhage, (3) ulcerating lesions, (4) operations on the brain or spinal cord in the past twenty-four hours, (5) parturition within twenty-four hours, (6) renal insufficiency, (7) advanced liver disease and jaundice, (8) subacute bacterial endocarditis.[12]

As to the local treatment of the limb, the patient is put on bed rest with the lower limbs elevated 20 to 30 degrees. Heat will help relieve the pain and it is advisable except in the presence of ischemia. Leg exercise is encouraged and ankle

and toe exercises are advocated. When the patient becomes ambulatory, he should wear ace bandages or elastic stocking.

In this series of cases there were 158 patients having thrombophlebitis without pulmonary embolism. Of these 110 were treated with anticoagulants, 32 with Heparin and coumoral drugs and 78 with coumoral alone; two had unilateral superficial femoral ligation; two had saphenous ligation for superficial phlebitis; and 44 were treated with rest, elevation, heat and elastic support. All of these patients recovered sufficiently to be discharged from the hospital and we have no further follow-up.

Removal of Recently Formed Clot

(A) Using fibrinolytic agents for medical thrombectomy would be the ideal way because it actually gets into the smaller venous tributaries. We have had very limited experience with the fibrinolytic agents that are on the market. Gans[16] in a Collective Review of Thrombosis and Thrombolysis concluded that "enzyme therapy definitely has something to offer these patients." But, "the feeling prevails that, since these medications are not free from serious hazards, that time for their routine use is not yet here." When used, however, it is not a substitute for anticoagulant treatment. The fibrinolytic mechanism is as complicated as that of clotting and is not yet thoroughly understood.

(B) **Thrombectomy**—Mahorner, Castleberry, et al[17] have advocated early thrombectomy in acute ilio-femoral thrombophlebitis. Removal of an occluding thrombus from a common femoral vein and the further aspiration of veins in the proximal and distal direction in the early phases is at times reported to cause dramatic decrease in the swelling of the extremity. It is felt, therefore, that the long-term postphlebitic limb will be prevented or reduced in magnitude and the possibility of pulmonary embolus will be lessened. The technique consists of opening the common femoral vein and removing as much clot as possible by means of suction and compression of leg and thigh. The veins are irrigated with dilute Heparin. The patient is then placed on Heparin therapy while still in Operating Room.

In 33 patients reported by Haller,[2] 22 of them had normal legs following thrombectomy. Mahorner, et al[17] reported that in 12 of 16 cases the swelling disappeared. Two cases of axillary vein thrombosis responded well. The good results following thrombectomy depend on the following factors:

(1) Removal of clot as soon as possible after onset of symptoms.

(2) The ease of the clot removal.

(3) Whether or not good back flow can be established at time of surgery.

Since the authors began preparation of this report, we have had experience with thrombectomy in two patients with acute ilio-femoral thrombophlebitis. One was operated upon the seventh day after onset of acute symptoms and removal of the clot was done with considerable ease and the result was impressive in a matter of one week. The second case was done on the fifth day after onset of symptoms, and although much clot was removed the back flow was never very brisk, but the severe pain was relieved in a matter of days and within three weeks, there was only 1½ cm. difference in calf and thigh as compared to the good leg.

In the treatment of phlegmasia caerulea dolens which is the severe form of acute ilio-femoral thrombophlebitis and which presents the possibility of gangrene there seems to be considerable variation. Some authors believe that Heparin therapy alone or in conjunction with sympathetic blocks should be used. There is some evidence that sympathetic block is contraindicated due to increased blood volume in the extremity. Fasciotomy[18] has been advocated. However, thrombectomy as discussed in the paragraph above probably offers the most encouraging results of all methods of treatment.[19]

Pulmonary Embolism

Once the diagnosis of pulmonary embolism is made then the only sure way to prevent further embolization is by proximal vein ligation. Of the various methods

of treatment, ligation of the inferior vena cava offers the greatest assurance. It has the advantage over superficial femoral vein ligation in that a single ligation prevents further embolization from both lower extremities and the pelvis. The disadvantages are swelling of the lower extremities and late sequelae of pain, edema and sometimes ulceration. To combat this post ligation edema in the lower extremities various modifications in methods of ligating the vena cava have been proposed, such as, use of a nylon clip instead of a ligature which allows small amounts of blood to go through the vena cava or the use of a sieve.

In evaluation of factors which influence the formation and extent of venous thrombosis, Anderson and Shields[5] have shown that cava ligation alone in dogs produces a sustained elevation of the venous pressure in the lower extremities and resulted in venous thrombosis rate of 70 per cent. In 20 per cent the thrombosis was extensive.

It seems to be best to ligate the vena cava just below the renals which gives more lumbar veins to circumvent the blood. In the female patient with pelvic thrombophlebitis it is necessary to ligate both ovarian veins in addition to the vena cava. Collins[20] has done pioneer work on this problem.

The indications for operation are: (1) peripheral phlebitis with pulmonary embolism, (2) pelvic thrombophlebitis with embolism, (3) progressive deep thrombophlebitis which is not controlled by anticoagulants or in which a contraindication to anticoagulants exists, (4) prophylaxis in a patient undergoing other operative procedures who has had or who now has severe thrombo-embolic disease, (5) recurrent embolization during anticoagulant therapy.[21]

Anticoagulant therapy with Heparin and Dicumoral is also used after pulmonary embolism has occurred.

Of the 200 cases which we reviewed, 42 had pulmonary embolism. Of these 15 were treated with anticoagulants (Heparin and coumoral drugs); 11 had bilateral superficial femoral vein ligation; 13 had inferior vena cava ligation; 2 had superficial femoral vein ligation followed by inferior vena cava ligation because patients had further emboli after first operation; and one had cephalic vein ligation. Of this group there were 6 (14 per cent) deaths, 2 occurring after vena caval ligation and 4 in patients receiving anticoagulant drugs. It is our opinion that if embolization has occurred from the lower extremities or pelvis, caval ligation is treatment of choice.

Surgical Treatment of Pulmonary Embolism

It has been shown in recent years that patients with pulmonary embolism can successfully be operated upon and have the thrombus removed from the pulmonary artery. It is remarkable to note that Trendelenberg attempted pulmonary embolectomy in 1908. In recent years the operation has been successful and life saving.

Cooley and associates[22] report three successful cases done in the past year. With their use of the pump oxygenator utilizing glucose instead of blood as primer, the cardio-pulmonary by-pass is more readily available. In a recent paper Dennis Rosenberg[23] presented two successful embolectomies done by himself and associates in New Orleans and listed approximately 20 cases done recently over the United States and England. In studying 100 records of autopsy cases of pulmonary embolism, 29 patients survived for two hours or more after the onset of symptoms and 12 patients lived more than twelve hours. It is in the group which continues to deteriorate with more conservative methods that pulmonary embolectomy with the use of extra corporeal circulation should be considered. The two patients in our series who expired after vena cava ligation died from effects of the emboli before surgery was done. It is possible that these could have been salvaged by pulmonary embolectomy since they lived more than twelve hours after embolization.

We are presenting two cases to demon-

strate the seriousness of superficial thrombophlebitis.

Case Reports

Case No. 1. A 13-year-old white male child was admitted to the hospital on June 16, 1962, complaining of chills, fever, headache, pain and swelling of the left arm. Symptoms had been present for two days. He gave history of having a furuncle on the upper left forearm 10 days previously and this was almost healed. Examination revealed the healing furuncle of the forearm; swelling, redness and tenderness of the left arm with a cord-like induration extending along the course of the cephalic vein from the elbow to the deltoid area. Blood cultures were positive for *Staphylococcus aureus*. Chest x-ray revealed discrete areas of infiltration in the left upper lobe. Chills, fever and positive blood cultures persisted in spite of antibiotic therapy. On June 22, he was operated upon. The junction of cephalic and axillary veins was exposed and the cephalic vein was found to be thrombosed from this point distalward. Cephalic vein was ligated, subsequent blood cultures were negative and fever rapidly subsided. He was discharged from the hospital on June 27, 1962.

Case No. 2. This 14-year-old white male was admitted on September 14, 1960 with history of having a blister on right great toe which became infected. Two days before admission he developed pain in right thigh and hip and the following day began to have fever and shortness of breath. On admission, temperature was 103°, pulse was 100, respiration 35. He was acutely ill. The right thigh and leg were edematous. X-ray of chest revealed patchy densities in both lung fields highly suggestive of foci of infection following showers of septic emboli. On September 15, 1960 inferior vena cava ligation was done. Recovery was complicated by development of pericarditis and endocarditis, but these responded to antibiotics. He was discharged from the hospital on October 8, 1960.

Summary

1. Incidence of thrombophlebitis is increasing as a complication of surgery, injury and chronic illnesses. It is an ever present threat to life and causes great morbidity.

2. Preventive measures have been discussed.

3. Anticoagulant therapy remains the preferred management of thrombophlebitis without embolism.

4. In thrombophlebitis with pulmonary embolism inferior vena cava ligation is the preferred method of treatment.

5. Thrombectomy seems to offer an additional therapeutic approach to acute iliofemoral thrombophlebitis. The ideal treatment will be accomplished when adequate fibrinolytic agents are developed.

6. Pulmonary embolectomy is now feasible and offers an additional method to salvage patients in selected cases and should be attempted where facilities are available.

7. We have presented our experience in relation to the above principles.

References

1. Thrombophlebitis and Cancer, Cancer Bull. (Texas) 14:62 (July-Aug.) 1962.

2. Haller, J. A., Jr.: Thrombectomy for Deep Thrombophlebitis of the Leg, New England J. Med., 267:65 (July 12) 1962.

3. Zollinger, R. W., Williams, R. D., Briggs, D. O.: Problems in the diagnosis and treatment of thrombophlebitis, Arch. Surg. (Chic.) 85:18 (July) 1962.

4. Hobsley, M. and Patey, D. H.: Muscular strain as a factor in postoperative thrombosis in the deep veins of the calf, Brit. J. Surg. 49:620 (May) 1962.

5. Anderson, M. C. and Shields, T. W.: An evaluation of factors which influence the incidence and extent of venous thrombosis, Surgery, 51:347 (March) 1962.

6. Ternberg, J. L., Bailes, P. M., Jr., and Butcher, H. R., Jr.: Acute superficial saphenous thrombophlebitis, Amer. J. Surg. 102:691 (Nov.) 1961.

7. DeWolfe, V. G.: Thrombophlebitis and venous thrombosis associated with carcinoma, Amer. Practit. 12:654 (Sept.) 1961.

8. Sarjeant, T. R.: Management of acute ilio-femoral thrombophlebitis, Surg. Clin. N. Amer. 40:1261 (Oct.) 1960.

9. Popkin, R. J.: Venous thrombosis with edema of the extremity: Is it a new disease? Angiology 9:238 (Aug.) 1958.

10. Lowenberg, E. L.: Femoral vein thrombectomy and regional heparinization in lieu of vena cava ligation for thrombophlebitis and pulmonary embolism, Am. Surgeon, 21:1038 (Oct.) 1955.

11. Allen, E. V., Barker, N. W., and Hines, E. A.: Peripheral Vascular Diseases, Philadelphia, W. B. Saunders Co., 1947.

12. Schilling, John A.: The use of anticoagulants in thrombo-embolism, Current Surgical Management, 11 PP 262-265, W. B. Saunders, Philadelphia.

13. Anlyan, W. G., and Hart, Deryl: Special Problems in Venous Thromboembolism, Annals of Surg. 146: 499, 1957.

14. DeCamp, P., Ochsner, A., and DeBakey, M. E.: Thromboembolism in Children, Analysis of 35 Cases, Annals of Surg., 133:611, 1951.

15. Butcher, H. R., Jr.: Anticoagulant drug therapy for thrombophlebitis in the lower extremities. An evaluation, Arch. Surg. 80:864 (May) 1960.

16. Gans, Henry: Thrombosis, Int. Abstracts of Surg., 113:6, 513, 1961.

17. Mahorner, H., Castleberry, J. W., and Coleman, W. O.: Attempts to Restore Function to Major Veins Which are the Site of Massive Thrombosis, Annals Surg., 146:510, 1957.

18. Cynes, S. Louw: Phlegmasia Caerulea Dolens:

Successful Treatment by Relieving Fasciotomy, 51:169 (Feb.) 1962.

19. DeBakey, M. E.: Yearbook of General Surgery, 325, 1962-63 series.

20. Collins, C. G. and Nelson, E. W.: Phlebothrombosis and Thrombophlebitis in Gynecology & Obstetrics, Am. J. Obst. & Gynec., 52:946, 1946.

21. Miller, D. R.: Inferior Vena Cava Ligation for Thrombo-embolism, Current Surg. Management II, W. B. Saunders, Philadelphia, 255.

22. Cooley, D. A., Beall, A. C., Jr.: Technique of Pulmonary Embolectomy Using Temporary Cardio-pulmonary By-pass, Clinical and Experimental Considerations, J. Cardiovas. Surg., 2:409.

23. Rosenberg, D., Pearce, C., and McNulty, J.: Surgical Treatment of Pulmonary Embolism. In press.

A New Threat to Medical Progress

Of mutual interest is a little piece of legislation called the "Drug Amendments of 1962". . . . Thirteen provisions of the new law will require issuance of new or interpretive regulations, or revision of old regulations. The nature of these regulations, and how they are applied, will be the real measure of the impact of the new legislation. If the regulations are of such a nature as to give members of the health team maximum freedom consistent with the public interest, then the country can benefit from the new law. If, however, the implementing regulations are needlessly severe, they might easily slow down the flow of effective drugs and raise their costs. The F.D.A. has already proposed a series of regulations on clinical testing. These are so severe as presently worded that, according to the opinions of hundreds of research scientists, they pose a real threat to medical progress.—Austin Smith, M. D., President, Pharmaceutical Manufacturers Association, to National Association of Chain Drugstores, Oct. 25, 1962.

The Present Status of Gamma Globulin Therapy For Asthmatic Children*

• A better understanding of the use of gamma globulin is required of the practicing physician.

ORVILLE C. THOMAS, M. D.
JOHN P. McGOVERN, M. D.
Houston, Texas

THOSE who deal with asthmatic children agree that upper respiratory tract infection precipitates attacks in these patients, that the exact mechanism of this phenomenon is not well understood, and that, at present, there is no truly reliable way of preventing such infection.[1]

The use of gamma globulin to prevent respiratory infection in asthmatic children has been the subject of controversy for eight or nine years. The marked difference of opinion expressed in the literature, particularly during the past four years, has been confusing to the practicing physician. We believe that the use of gamma globulin in any allergy problem will be better understood once the physician is familiar with certain factors. The first is the various types of gamma globulin as expressed in Svedberg units (7 S gamma 1 globulin, 7 S gamma 2 globulin, and 19 S gamma 1 globulin) and the various antibodies carried in each component. Second, metabolism of the gamma globulins, including placental transfer, must be understood. The third factor is the various qualitative and quantitative methods of determining serum levels of gamma globulin. And fourth is the various aspects of immunity and hypersensitivity in patients with agammaglobulinemia, hypogammaglobulinemia and dysgammaglobulinemia. Although it is impossible to discuss all these aspects in the time allotted for this round-table, we consider it extremely important that the physician who gives gamma globulin be familiar with it.

Literature Review

Bowen[2] in 1955 was the first to write about the use of gamma globulin in the treatment of asthmatic children. He studied 150 asthmatic children, from 1 to 14 years of age, whose attacks were precipitated chiefly by wintertime upper respiratory infections. Bowen treated half this group with gamma globulin, administering 5 ml. every four weeks from October through March. In over 1000 injections, there was no untoward systemic reaction or occurrence of jaundice. Bowen reported that the children treated with gamma globulin had at least 50 per cent fewer asthma attacks than those in the control group and only three required hospitalization. By contrast, seven children in the control group required hospitalization and the group as a whole lost more time away from school. Among pre-school children, those treated with gamma globulin were at least 70 per cent improved as compared with the other group.

Prior to treatment, gamma globulin determination by paper electrophoresis was made in only 43 of the children. No child showed any quantitative deficiency in gamma globulin levels. Bowen concluded: "Let it be understood that gamma globulin is not a cure-all but let all of us include this in treating patients whose respiratory resistance is not good." Since 1955 a number of investigators have published studies closely agreeing with this view. These include work by Biraton,[3] involving treatment of 300 patients with gamma globu-

* Presented at the Eighty-second Annual Meeting of the Louisiana State Medical Society, as part of a round-table discussion on common problems in pediatric allergy, May 9, 1962, Monroe, Louisiana.

lin over a twelve-year period, and studies by Crepea and Friedlaender,[4] Brown and Botstein,[5] Friedlaender and Weiner,[6] and Gordon and Spencer.[7] All agreed that gamma globulin had some place in the treatment of asthmatic children.

In 1958 Abernathy, Strem and Good[8] published the results of a well-controlled study on asthmatic children in which gamma globulin was given in dosages of 0.6 gm. per kilo of body weight every four weeks. They concluded that gamma globulin was not beneficial to prophylaxis against infection, in persons with a normal concentration in their sera, except in cases of measles, hepatitis and possibly rubella and poliomyelitis.

In a recent report to The American Academy of Allergy, Fontana[9] presented the results of a carefully controlled double-blind study on children whose asthma was associated with frequent infections. He concluded that maximum doses of gamma globulin were of no benefit in reducing the number of days of wheezing or the number of infections encountered.

Writing in a December, 1961, issue of *The New England Journal of Medicine,* Hill[1] stated that he could see no purpose in giving gamma globulin routinely to asthmatic children who have normal levels of gamma globulin in their sera.

Dysgammaglobulinemia

Many who advocate the routine use of gamma globulin in asthmatic patients feel that dysgammaglobulinemia may be involved; they suggest that the problem is not inadequate amounts of gamma globulin but the abnormal character of the gamma globulin and antibodies which therefore are not effective. It is true that in recent reports,[10] children with repeated recurrent infection have been found to have a disturbance of gamma globulin synthesis characterized by a deficiency in the formation of both 7 S gamma 2 globulin and 7 S gamma 1 globulin, but an increased formation of the 19 S gamma 1 globulin or the so-called Beta-2-M globulin. It will be remembered that the 7 S gamma 2 component of the globulin carries approximately 95 per cent of the antibodies. A patient with a deficiency of both gamma 1 globulins but normal amounts of 7 S gamma 2 globulins also has been reported.

However, it should be remembered that these cases of dysgammaglobulinemia are indeed rare. Although the separation of the globulins into these components (7 S and 19 S) is not usually available to the practicing physician, the total value of the gamma globulin can be determined in most laboratories. It should be stressed that in the cases of dysgammaglobulinemia noted, the patients had below-normal levels of total gamma globulin, usually in the range of 150 to 250 mg. per 100 ml. of serum. Although the normal gamma globulin levels range from 600 to 1200 mg. per 100 ml. of serum, it is believed that 150 mg. per 100 ml. of serum will give adequate protection against infection, provided the gamma globulin components are normally distributed.

A physician may occasionally encounter a child with repeated respiratory infections whose gamma globulin level is somewhat below normal, perhaps 300 to 500 mg. per 100 ml. In such a case, he is justified in feeling that he may have a true case of dysgammaglobulinemia. A practical and easily accessible method of solving this problem is to observe the H and O antibody titre response to typhoid vaccine (the H antibody is carried in the 7 S gamma 2 globulin, whereas the O antibody is carried in the 19 S gamma 1 globulin). If there is a normal response of both H and O antibody titres, the physician should conclude that he does not have a case of dysgammaglobulinemia. If there is little or no rise in the H antibody titre and a marked rise in the O antibody titre, he may tentatively diagnose dysgammaglobulinemia. The patient's serum should then be sent to a laboratory for ultracentrifugation and quantitative specific precipitation tests using rabbit antiserum specific for each gamma globulin group.

Certain chronic diseases are associated with abnormal metabolism of the protein

fractions of the blood. Many of these diseases will cause an abnormal distribution of the gamma globulin and are often associated with hypergammaglobulinemia. They include multiple myeloma, lymphoma, lymphatic leukemia, cirrhosis of the liver, nephrosis, lupus erythematosus, syphilis, rheumatoid arthritis, periarteritis nodosa, subacute bacterial endocarditis, malaria, tuberculosis, carcinoma and sarcoidosis.

The available evidence, as well as our own personal experience, leads us to agree with Hill and with Abernathy, Strem and Good concerning the routine use of gamma globulin in asthmatic children to prevent respiratory infection. As previously stated, these authors believe that gamma globulin does not prove beneficial in prophylaxis against infection, in persons who have a normal concentration of gamma globulin in their sera, except for measles, hepatitis and possibly rubella and poliomyelitis. We do believe that gamma globulin should be used when there is evidence of agammaglobulinemia, hypogammaglobulinemia or dysgammaglobulinemia, as determined by accurate quantitative tests.

References

1. Hill, Lewis W.: Certain Aspects of Allergy in Children. New England J. Med., 265:1248 (Dec. 21) 1961.

2. Bowen, R.: Gammaglobulin and Asthmatic Children. J. Allergy, 26:87, 1955.

3. Biraton, H. S.: Use of Gammaglobulin in Allergy. So. Med. J., 50:934, 1957.

4. Crepea, S. B., and Friedlaender, S.: Use of Gammaglobulin in Treatment of Intrinsic Asthma. J. Allergy, 30:439, 1959.

5. Brown, E. B., and Botstein, A.: The Effect of Gammaglobulin in Asthmatic Children. N. Y. State J. Med. (Aug. 15) 1960, p. 2539.

6. Friedlaender, S., Friedlaender, A. S., and Weiner, L.: Gammaglobulin in Management of Asthma Associated with Infection. Am. J. M. Sc., 238:18, 1959.

7. Gordon, B. D., and Spencer, S.: Hypogammaglobulinemia. Common Variant in Children Responsive to Therapy. J.A.M.A., 174:269, 1960.

8. Abernathy, A. S., Strem, E. L., and Good, R. A.: Chronic Asthma in Childhood: Double Blind Controlled Study of Treatment with Gammaglobulin. Ped., 21:980, 1958.

9. Fontana, V. J., Kuttner, A., Heinz, W., and Holz, P.: Report on the Use of Gammaglobulin in Asthmatic Children. Given before the Amer. Acad. of Allergy, Denver, Colo., Feb., 1962. Reported in Med. Tri. (Feb. 26) 1962.

10. Rosen, F. S., Kevy, S. V., Merler, E., Janeway, C. A., and Gitlin, D.: Dysgammaglobulinemia and Recurrent Bacterial Infection. Lancet (April) 1961.

The Low Cost of High Quality

In the field of health care, particularly, the quality has gone up so remarkably that, of course, the cost to some degree has gone up; but the net result is that we are getting so much more for our health dollar today than ever before, that one becomes disturbed to hear the attacks made about its cost without reference to its quality. Certainly a bottle of wonder drug costs ten dollars today, and one can still buy a bottle of patent medicine designed to cure the same ill for one dollar. I don't think anyone doubts that for the ten dollars, in a much smaller bottle, one gets a thousand times, not ten times, the health per dollar spent.—The Hon. Thomas B. Curtis (Rep., Mo.) to Medical and Chirurgical Faculty of the State of Maryland, April 5, 1962.

Some Specific Cardiovascular Abnormalities Amenable to Surgery: Case Reports*

• The purpose of this paper is to present in brief, examples of cardiovascular disorders now amenable to surgery.

WALTER J. HOLLIS, M. D.†
New Orleans

AS short a time ago as fifteen years, some of these disorders were untreatable, excepting medical therapy for cardiac failure when needed. As emphasis, I would like to paraphrase a quotation from an article on cardiac disorders in 1948. "That a defect of the atrial septum will one day lend itself to surgical closure may yet prove to be more than an over optimistic prediction, despite the technical difficulties which make such a procedure impossible today." [1] The time of treatability has arrived through the efforts of many groups and individuals. The following cases will be presented.

Case Histories

Case No. 1: Mitral Stenosis.

A 31 year old colored female with rheumatic heart disease, auricular fibrillation and heart failure, on digitalis, was first studied on January 8, 1957. At that time (Table 1), the pulmonary

TABLE 1
CASE 1. MITRAL STENOSIS

	PA mm. Hg.	PCW mm. Hg.
Before surgery	130/65	38
After surgery	41/19	< 28

artery pressure was 130/65, about 30 mm. Hg. greater than the systolic brachial arterial pressure. The pulmonary capillary wedge pressure was significantly elevated (38 mm. Hg.). The approximated pulmonary arteriolar resistance was 2,850 d.s. cm. –5. These findings implied marked right heart and pulmonary hypertension, marked left sided (mitral valve) resistance to flow and severe pulmonary arteriolar changes. In conjunction with physical findings, the diagnosis of mitral stenosis of a severe degree with marked secondary vascular changes in the lungs was made.

In the presence of such a degree of secondary pulmonary vascular changes, considerable debate ensued concerning the advisability of mitral valvotomy, particularly in regard to the degree of benefit to be expected. However, a decision to operate was made and a closed mitral valvotomy was done in the spring of 1957. A lung biopsy at that time showed interstitial fibrosis. After a rather prolonged convalescence, the patient was discharged from the hospital definitely improved.

She was restudied on November 4, 1958 and a rather remarkable hemodynamic improvement was found. The pulmonary artery pressure was 41/19 mm. Hg., only 16 mm. Hg. above normal pulmonary systolic pressure. The pulmonary capillary wedge pressure was not obtained due to technical difficulty. However, an estimate of the degree of improvement can be obtained, since the mean pulmonary arterial pressure equalled 28 mm. Hg., being 10 mm. Hg. lower than the pulmonary capillary wedge pressure on January 8, 1957. These findings indicated a very good response to the valvotomy and a remarkable regression of pulmonary hypertension. The patient has done well since, being definitely improved compared to her preoperative condition.

Case No. 2: Ruptured Aortic Sinus of Valsalva.

A 27 year old white female was first seen in 1962. She had a history of a murmur since the age of 16 years, following a sudden episode of anterior chest pain.

She had carried four pregnancies to termination without difficulty, but seven months prior to being seen at Charity Hospital she had experienced signs of cardiac failure and was digitalized.

Physical examination revealed a very large heart with vigorous precordial pulsations. A continuous murmur with marked diastolic accentuation was heard and confirmed by phono-

† From the Department of Medicine, Louisiana State University School of Medicine and the Heart Station, Charity Hospital of Louisiana at New Orleans.

* Presented at the Eighty-third Annual Meeting of the Louisiana State Medical Society, New Orleans, May 7, 1963.

TABLE 2
CASE 2. RUPTURED AORTIC SINUS OF VALSALVA

	RV mm. Hg.	PA mm. Hg.	L → R shunt
Before surgery	90/10 → 15	65/25	3.8X
After surgery	36/4	28/12	< 0.25

cardiographic examination. A clinical diagnosis of ruptured aortic sinus of Valsalva was considered.

On February 13, 1962, cardiac catheterization was performed and the results showed a marked increase in oxygen volume per cent in the right ventricle, mainly in the outflow tract sample which exceeded the brachial arterial sample (RV– 17.7, BA– 17.2). A left to right shunt of 3.8 times the systemic venous return was calculated. The right ventricular pressure was 90/10-15 mm. Hg. and the pulmonary artery pressure was 65/25 mm. Hg., indicating a moderate degree of pulmonary infundibular stenosis.

On February 20, 1962, an aortic injection angiogram revealed filling of the pulmonary arteries and an aneurysmal bulge on the left side of the aortic root. For this reason an additional diagnosis of aortic septal defect was considered but the clinical and catheterization diagnosis remained "ruptured aortic sinus of Valsalva into the right ventricular outflow tract".

Surgery, using extracorporeal circulation, was performed on March 14, 1962, and a ruptured posterior sinus of Valsalva into the right ventricular outflow tract was found. This was repaired through a right ventriculotomy, using mattress sutures and Teflon buttons to prevent tearing of the sutures.

After a period of continued improvement, she was restudied on May 11, 1962. Significant reduction in right ventricular and pulmonary artery pressures had occurred. Right ventricular pressure had fallen to 36/4 mm. Hg. and pulmonary artery pressure was 28/12 mm. Hg. From oxygen analysis, the presence of a shunt could not be said to be present at the right ventricular outflow area and for practical purposes was no longer present. However, using a hydrogen inhalation technique,[2] slight detection at the right ventricular outflow tract was recorded. Nevertheless, the condition is essentially corrected as far as clinical and physiologic purposes are concerned. The patient remained improved and was doing well in December, 1962.

Case No. 3.

A 40 year old colored female with a ventricular septal defect was studied on July 10, 1956. At that time she was decompensated and on digitalis. The right ventricular and pulmonary artery pressures were respectively 80/15 and 80/30 mm. Hg., indicating right ventricular failure. There was a 3.0 oxygen volume per cent increase at the right ventricle, compatible with the diagnosis of interventricular septal defect. The left to right shunt at this level was about 1.2 times the systemic venous return to the heart.

She was referred to the Houston Cardiac Surgery Center and correction of the defect using extracorporeal circulation was done.

Restudy on August 6, 1957, showed no increase of oxygen volume per cent at the right ventricular level and the right ventricular pressure was 35/10 mm. Hg. The final opinion was corrected ventricular septal defect.

The patient remains well and employed as a laboratory aid at this writing. She remains on digitalis and takes 40 units of NPH insulin for diabetes which developed after the surgery. Her electrocardiogram shows a right bundle branch block and the chest x-ray shows moderate cardiomegaly.

Discussion

The first case demonstrates the rather remarkable results that can be obtained when a satisfactory valvotomy is accomplished in severe mitral stenosis. All cases do not end so well, however. If the valvotomy results in a significant degree of mitral insufficiency, such cases may be unimproved or worse after surgery. At times the valve is too diseased to permit a satisfactory valvotomy by the closed technique. However, the open-technique and use of artificial valves may offer some hope in these cases.

The second case reveals the dramatic results in a rather uncommon disorder. Prior to the era of open-heart surgery little could be accomplished in this condition. Since the development of this technique, a number of cases successfully corrected have been reported in the literature.

The third case reveals the results that

TABLE 3
CASE 3. VENTRICULAR SEPTAL DEFECT

	RV mm. Hg.	PA mm. Hg.	O_2 ↑ at RV	L → R shunt
Before surgery	80/15	80/30	3.0 vol. %	1.2X
After surgery	35/10	Not Measured	0.0 vol. %	None

can be obtained in one of the more common intracardiac disorders, even as late as the fifth decade in symptomatic patients. This patient was changed from an incapacitated state to a condition of active employment and has been working for six years.

Summary

1. Three examples of cardiovascular disorders treatable by surgery have been presented. These were cases of mitral stenosis, ruptured aortic sinus of Valsalva and ventricular septal defect.

2. General remarks of discussion have been given in regard to each case.

Reference

1. Dry, T. J.: Atrial Septal Defects. Medical Clinics of North America, pp. 895-910 (July) 1948.

2. Martinez-Lopez, J. I., Hollis, W. J., Kirkley, D. E. and Levy, L., II: Use of the Triple-Platinum Hydrogen Electrode for Detection of Left-to-Right Shunts. Am. J. Cardiol. 10:70, 1962.

Dear Senator Kefauver . . .

K. S. Williams, a midwestern businessman, recently sent a letter to U.S. Senator Kefauver, which said in part: "On October 29, 1961 my wife was taken seriously ill . . . a gangrenous blocked intestine. I don't know whether the $82 worth of drugs she received cost 82 cents or $8,200 to produce, and I couldn't care less. The profits which the drug companies made financed the necessary research to develop drugs and equipment which saved by wife's life. I am getting very fed up with the attitude you and many people in Washington are taking—that profits are criminal, sinful, and should be eliminated. The profit motive is behind newer, cheaper, and better ways of doing things. I hope that neither you nor I have our life span cut short by the lack of a drug which was not developed."—John L. Bach in **New Physician,** October 1962.

Evaluation of Griseofulvin After Four Years*†

• The degree to which griseofulvin is effective seems to be related to the site involved. The problem now is the duration of treatment.

VINCENT J. DERBES, M. D.
LORRAINE FRIEDMAN, Ph.D.
New Orleans

SINCE Gentles' historic note, "Experimental ringworm in guinea pigs, oral treatment with griseofulvin",[1] this antibiotic has been used through much of the world for treatment of superficial fungus infections in man and its efficacy has been unanimously acclaimed. The degree of its effectiveness, however, seems to be related to the site involved, tinea capitis being the most responsive and onychomycosis, the least. The battle which now ensues is the familiar one of mode of treatment, i.e., dosage and duration of dosing.

Tinea Capitis

Following successful early trials, griseofulvin has virtually replaced other treatments for tinea capitis. Usually the manufacturer's prescribed schedule of dosage is followed, one gram by mouth daily until cured; two successively negative cultures has gained wide acceptance as the unequivocal criterion of cure. Recently, Williams[2] the first to use griseofulvin in human disease, has suggested that the dosage in current vogue may be well over the necessary curative level. Perhaps the most extensive study of efficacy related to dosage has been done with tinea capitis caused by *Trichophyton violaceum*. While this agent is not indigenous to the United States the pertinent findings are summarized here since the principles may be applicable to tinea capitis caused by other fungi. Dr. E. I. Grin of the Institute of Dermato-venereology in Yugoslavia, in cooperation with the World Health Organization, headed a team of physicians, statisticians and other public health workers in an epidemiologic survey followed later with therapeutic trials.[3] Through a house-to-house campaign in 3 small villages (total population 4106) known to have a high incidence of ringworm, 495 cases were detected and treated with 25 to 50 mg. per kg. once or twice weekly for four weeks, with or without local treatment. The latter consisted of removal of the hair at the beginning and eighteen to twenty days after the beginning of treatment, application of fungicides, and washing of the scalp. The criteria of cure were clinical clearance of lesions plus negative microscopic and cultural findings six months after termination of treatment. There was no significant difference between the cure rates obtained with any of the 3 dosage schedules. Local treatment, however, produced a significant difference in recovery rate. It is impressive that as little as 25 mg. given only once weekly for four weeks but in combination with topical fungicides cured approximately 95 per cent of patients with tinea capitis of a type generally considered to be quite resistant. Since *T. tonsurans* produces a form of tinea capitis clinically similar to that caused by *T. violaceum*, the same treatment might prove effective and this would be particularly pertinent inasmuch as *T. tonsurans* tinea capitis is a common problem in certain areas of the U. S., including Louisiana. Also, Grin's results lend support to Williams' contention that many patients are being overtreated.

* Presented at the Eighty-third Annual Meeting of the Louisiana State Medical Society, New Orleans, May 8, 1963.

† From the Division of Dermatology and Department of Microbiology, School of Medicine, Tulane University. Supported in part by USPHS 2E-3(C4).

No investigation of comparable magnitude has been conducted with the agents commonly causing tinea capitis in the United States but one of the studies that can be cited is that of Behrman, Mandel and Morse[4] who reported the results of 246 trials involving 25 treatment programs in patients infected for the most part with *M. audouini.* Griseofulvin was given daily in all instances with 250 mg. being the minimum level and 2000 mg., the maximum. The duration of treatment was varied between three and forty-two days of daily or deliberately interrupted administration.

In general, the percentage of cures was greater among groups treated for the longer periods of time for the duration of infection from beginning of therapy until cure did not appear to be affected by the dosage; irrespective of the schedule employed. Six to nine weeks was the usual time before there was unequivocal evidence of cure. Favorable response was evident much earlier, however, by rapid decrease in lesions and intensity of fluorescence. Significantly, these investigators found no case which did not eventually respond to treatment with griseofulvin. Their data suggest longer duration of treatment, rather than a higher daily dosage is more likely to produce cure. Stritzler, Rein, and Ulku,[5] also, tried a variety of dosage schedules and found all were fairly effective, including a single dose of 4 grams. Their study was of 165 children infected with *M. audouini, M. canis* or *T. tonsurans.*

Our own therapeutic studies have been concerned with the control of tinea capitis from a public health point of view. Feeling that a natural immunity does develop, at least in those infections caused by *M. audouini,* we have further hypothesized that extensive medication such as daily doses may not be necessary. Actually, a number of investigators[2, 5-9] have felt that a single "loading" dose may be curative. Since griseofulvin taken orally is eventually deposited in the keratin layers it should, therefore, have a prolonged effect. In one of our series (unpublished), 73 Negro school children were given 3 grams in a single dose, without local medication or hygienic procedures above those normally observed among indigent populations. While the cures were not rapid when measured by the criterion of negative culture, there was nearly always a clinical cure at the first observation four weeks after administering the griseofulvin, or, if not, a dramatic reduction in intensity of infection. In a few instances, perhaps unnecessarily, second "loading" doses were given. It is our feeling that even the reduction in degree of infection greatly reduces the reservoir of infection, hopefully to a level which will minimize contagion and thus eliminate or markedly reduce this disease as a public health problem.

Unfortunately, a precise measurement of the effectiveness of griseofulvin in tinea capitis, at least in that caused by *Microsporum* species, is complicated by a lack of information regarding the spontaneous cure rate. In much of the dermatologic literature non-inflammatory ringworm has been classed as highly resistant to therapy, clearing spontaneously only at puberty. In other of our studies[10] we have found, to the contrary, a great majority of cases will clear without treatment and well before the age of puberty, thus supporting the often ignored but long held teachings of Kligman[11] and a small following (e.g.,[12]). It is difficult, therefore, to determine what percentage of the reported cures attributed to griseofulvin actually are due to this drug.

Therapy of Skin Ringworm

Griseofulvin therapy of glabrous skin ringworm has accumulated a voluminous literature and an equal aggregate of rumors but perhaps the most practical guide lines are those set down by Beare.[13] His conventional dosage for adults has been 1 gram daily. With regard to the feet and groins, it is his opinion that if the patient has taken the bother to come for examination because of symptoms referrable to proven ringworm, then griseofulvin should be started and should be continued until

the patient is symptom-free. It should always be borne in mind, however, that it may not be possible to free the skin of all clinical signs of infection—though this can usually be done—and that it is seldom possible to eradicate the fungus permanently from the affected areas. In other words, there is no point in aiming at getting a series of negative reports as one does for scalp ringworm. Once the patient is symptom-free, Dr. Beare suspends treatment until relapse occurs—which he thinks will be likely, particularly if the patient lives in a warm and humid environment. Hildick-Smith (personal communications) is of the impression, gained through his contact with dermatologists in all areas, that relapses are unusual and occur perhaps only among those who are immunologically or otherwise underprivileged. In our own experience, only 1 of 9 patients, whom we were able to observe two or three years after griseofulvin, had not relapsed. This picture may be askew, however, since those who answered our call to return may have been primarily those who relapsed. Also, among patients treated at the New Orleans Veterans Administration Hospital, relapses following discontinuation of therapy are common (personal communication, Dr. Frederick C. Griesehaber). Positive cultures confirmed these relapses.

Therapy of Nail Infections

Griseofulvin therapy of nail infections has been singularly disappointing. In our own studies, approximately 15 patients have been maintained on doses as high as 2 grams daily (which in view of more recent findings is probably excessive) for periods as long as two years. While there is usually slow but progressive improvement, a stage is usually reached beyond which improvement is imperceptible and most often this stage is met with toe- rather than finger-nails. Demis[14] stated the cure rate of finger-nails to be 90 per cent, usually requiring six to nine months of therapy, and the cure rate of toe-nails only 10 per cent, after twelve to eighteen months or even longer.

Similar observations were reported by Stevenson and Djavahiszwili[15] who gave 1.5 grams daily to 50 patients with chronic *T. rubrum* infection of the toe-nails. Twenty patients were clear within one year but 4 of these still had fungus in the toe webs. Fourteen others were treated for fifteen months; 8 still had fungus in the nail and 1 in the skin only. Of 21 patients cleared of fungus in the toe-nails and skin, fungus was again found in one or other of these sites in 13 cases within three months of stopping treatment. By contrast, in 38 of 41 patients the finger-nails were clear within one year and there was no relapse at that site. The failure of griseofulvin in toe-nail infections combined with the tedium of taking tablets daily over long periods of time has led to a search for more effective procedures. Since the slow replacement of keratin is thought to be the reason for these failures, some investigators (e.g., Demis,[14]) have tried artificial removal of keratin by surgical avulsion, in combination with topical griseofulvin. Thus far the observations are too early and the series too small to be conclusive.

Adsorption

In all forms of tinea the blood levels of griseofulvin attained and, as a consequence, the quantity of drug deposited in the keratin, is thought to correlate with clinical effectiveness.[16] One factor which influences absorption from the gastrointestinal tract is the particle size of the drug administered as first shown by Atkinson, et al.[17] Subsequent reports by Kraml, Dubuc and Gaudry[18] and by Duncan, Macdonald and Thornton[19] have confirmed and extended those initial observations. At the present time, all manufacturers supply griseofulvin of a small particle size, so-called micronized, microcrystalline or ultra-fine. Convincing clinical evidence that the ultrafine form is generally twice as effective as the less refined, however, is yet forthcoming although the report of Pettit[20] is encouraging. Several studies of this nature are in progress including those of Dr. Silas O'Quinn at the

Louisiana State University Department of Dermatology.

Another factor which influences the absorption of griseofulvin and which seems to have practical implications is that of diet. Crounse[21] in an excellent series of experiments has shown that even higher blood levels are obtained with fine particle griseofulvin if the drug is administered following consumption of a meal high in fatty foods. This observation may explain some of the previous failures not well understood. Another possible explanation for failure is the development of resistant organisms but this does not occur with sufficient frequency to explain all failures, for only a few instances have been reported.[22, 23]

Griseofulvin has indeed proved a remarkable drug and undoubtedly will prove even more so as soon as the optimal method of administering is better known. However, since it seems to be virtually without toxicity (e.g., [24-26]) very likely practitioners will long continue to feel that if a "little is good, a little more will do no harm".

Acknowledgement

The authors are extremely grateful to Dr. Gavin Hildick-Smith, Associate Director of Clinical Research of Johnson and Johnson, New Brunswick, New Jersey, for his valuable assistance in the preparation of this manuscript.

References

1. Gentles, J. C.: Experimeutal ringworm in guinea pigs, oral treatment with griseofulvin. Nature, 162:476, 1958.

2. Williams, D. I.: Dosage of griseofulvin. Brit. Med. Journ. 1:109, 1962.

3. Grin, E. I.: A controlled field trial in Yugoslavia of the efficacy of griseofulvin in the mass treatment of tinea capitis. Bull. W.H.O. 26:797, 1962.

4. Behrman, H. T., Mandel, E. H., and Morse, J. L.: Modern treatment of ringworm of the scalp, 391 trials of 25 treatment programs. J. Pediatrics 60:252, 1962.

5. Stritzler, C., Rein, R. L., and Ulku, K.: Tinea capitis treated with griseofulvin, evaluation of dosage schedules and some immunological studies. AMA Arch. Dermat. 85:99, 1962.

6. Blank, H. and Roth, F. J.: Treatment of dermatomycoses with orally administered griseofulvin. AMA. Arch. Dermat. 79:256, 1959.

7. Kirk, J. and Ajello, L.: Use of griseofulvin in the therapy of tinea capitis in children. AMA Arch. Dermat. 80:299, 1959.

8. Friedman, L., Derbes, V. J., and Tromavitch, T. A.: Single dose therapy of tinea capitis. AMA Arch. Dermat. 82:415, 1960.

9. Murrell, T. W., Manson, R. C. and Trice, E. R.: Tinea capitis in a public school system, control with griseofulvin. Virginia M. Monthly, 88:4, 1961.

12. Friedman, L., Derbes, V. J., and Hodges, E. P.: The course of untreated tinea capitis among Negro children. J. Invest. Derm. In press.

11. Kligman, A. M.: Pathogenesis of tinea capitis due to **Microsporum audouini** and **Microsporum canis**. I. Gross observations following the inoculation of humans. J. Invest. Derm. 13:231, 1952.

12. Ajello, L., Georg, L. K., Kaplan, W. and Kaufman, L.: Laboratory Manual for Medical Mycology, Second edition, 1962. U. S. Department of Health, Education, and Welfare, Public Health Service, Communicable Disease Center, Atlanta, Georgia.

13. Beare, M.: Ringworm of the skin and nails. The Practitioner, 188:616, 1962.

14. Demis, D. J.: Therapy of onychomycosis by nail avulsion and topically applied griseofulvin. AMA Arch. Dermat. 85:156, 1962.

15. Stevenson, C. J. and Djavahiszwili, N.: Chronic ringworm of the nails, long-term treatment with griseofulvin. Lancet, 1:373, 1961.

16. Everall, J. and Davies, R. R.: Griseofulvin for fungal infection of nails, a critical clinical, mycological and physiological evaluation, presented at the Twelfth International Congress of Dermatology, Washington, D. C., 1962.

17. Atkinson, R. M., Bedford, C., Child, K. J., and Tomich, E. G.: Human blood griseofulvin levels from different dosage schedules. Antibiotics and Chem., 12: 225, 1962.

18. Kraml, M., Dubuc, J. and Gaudry, R.: Antibiotics and Chem. 12:239, 1962.

19. Duncan, W. A. M., Macdonald, G., and Thorntou, M. J.: Some factors influencing absorption of griseofulvin from the gastrointestinal tract. J. Pharmacy and Pharmacology, 14:217, 1962.

20. Pettit, J. H. S.: Comparative trial of fine-particle griseofulvin in favus. Brit. J. Derm. 74:62, 1962.

21. Crounse, R. G.: Effective use of griseofulvin. AMA Arch. Dermat. 87:176, 1963.

22. Fisher, B. K., Smith, J. G., Jr., Crounse, R. G., Roth, F. J., Jr., and Blank, H.: Verrucous epidermatophytosis: Its response and resistance to griseofulvin. AMA Arch. Dermat., 84:375, 1961.

23. Michaelides, P., Rosenthal, S. A., Sulzberger, M. B. and Witten, V. H.: Trichophyton tonsurans infection resistant to griseofulvin. AMA Arch. Dermat. 83:988, 1961.

24. Pratt, R.: Griseofulvin. J. Pharmaceutical Sci. 51:7, 1962.

25. Russell, B., Frain-Bell, W., Riddell, R. W., Stevenson, C. J., Djavahiszwili, N. and Morrison, S. L.: Chronic ringworm infection of the skin and nails treated with griseofulvin, report of a therapeutic trial. Lancet 1:1141, 1960.

26. Friedman, L.: Symposinm, oral griseofulvin in superficial fungal diseases of the skin. II. Treatment of fungal conditions with griseofulvin, scientific background. J. La. State Med. Soc. 113:231, 1961.

Discussion

Dr. Silas E. O'Quinn* (New Orleans): It is always a pleasure to hear a discussion by Dr. Derbes whether it be in an informal teaching conference or in a formal presentation such as this. Those of us who know Dr. Derbes and Dr. Friedman know that they do good work and this paper reporting the theoretical and practical aspects of their considerable experience in the use of griseofulvin runs true to form.

* Department of Dermatology, Louisiana State University School of Medicine.

It has now been almost four and a half years since Dr. Harvey Blank (Arch. Derm., 79, 259, 1959) at the American Academy of Dermatology first reported on the use of griseofulvin in the treatment of the dermatomycoses in man. There have been many criticisms that griseofulvin has not been the miracle drug that was expected but I think that when the drug is used according to intelligent indications it stands the test of time. Griseofulvin is not a drug to be used for a therapeutic trial.

The diagnosis of the dermatomycoses can be established with relative ease and treatment with griseofulvin should be withheld until the presence of fungi has been established by the microscopic examination or culture of skin or nail scrapings or hair. Only a fraction of interdigital dermatoses in man are due to a dermatomycosis and griseofulvin is not helpful in the treatment of contact dermatitis of the feet, eczema or erythrasma nor will it be of benefit in the treatment of Tinea versicolor or the monilial or yeast infections of the skin or nails.

Treatment failure with griseofulvin can usually be attributed to one of two circumstances. In certain rare instances it has been demonstrated that a particular organism will show in vitro resistance to griseofulvin. Secondly, poor gastrointestinal absorption of griseofulvin may lead to ineffective levels of the drug in the keratin layers. As Dr. Derbes has mentioned, this second condition can usually be corrected by use of microcrystalline griseofulvin or by the administration of griseofulvin after a fatty meal.

In our experience with the long term use of griseofulvin in the treatment of chronic fungal infections of the skin and nails we have failed to find a patient who did not respond to some dose schedule of griseofulvin. Undoubtedly a number of these patients will show a relapse when griseofulvin is finally discontinued but we must remember that griseofulvin will not change the immunologic incompetence of a particular patient nor will it correct environment factors such as heat and moisture which may have been the original predisposing factors for the infection. In several cases that appeared to represent treatment failure with griseofulvin we found the coexistence of infections which do not respond to griseofulvin such as erythrasma of the groin or monilial infections of the nails.

The work which Dr. Derbes, Dr. Friedman and others are doing in determining the proper dose levels of griseofulvin is important for the toxic effects of drugs are often related to dosage given. The recent report (Alexander, Suzanne: Brit. J. Derm., 74, 72, 1962) of lupus erythematosus-like syndromes developing in two patients who were taking griseofulvin and of animal studies (Hurst, E. W. and Paget, G. E.: Brit. J. Derm., 75:105, 1963) where the administration of griseofulvin lead to the derangement of porphyrin metabolism, biliary cirrhosis and hepatoma formation make it necessary that we use the drug only when it is truly indicated and then only in minimally effective doses.

It has been a pleasure to read and to discuss this paper by Dr. Derbes and Dr. Friedman.

Necessity for New Drug Testing

Those who ask for drugs without side effects are asking for the impossible. Those who call for an end to drug testing in man are proposing something possible but calamitous. A moment's reflection should be enough to demonstrate to even the most outraged critic that any new drug has to be tested in man. Laboratory tests, and then animals tests, usually can provide a great deal of information, but there is always an element of uncertainty. At some point, some doctor is going to have to try the new compound on one human being, and then another—and another—until enough data are accumulated to warrant its more general use.—John T. Connor, President, Merck & Co., to American Hospital Association, Sept. 18, 1962.

The Journal of the Louisiana State Medical Society

Established 1844

Published by The Journal of the Louisiana State Medical Society, Inc. under the jurisdiction of the following named Journal Committee:

George H. Hauser, M. D., Ex-Officio
J. E. Knighton, M. D., Chairman
Sam Hobson, M. D., Secretary
H. H. Hardy, Jr., M. D.
M. D. Paine, Jr., M. D.

EDITORIAL STAFF

PHILIP H. JONES, M. D., Editor

COLLABORATORS—COUNCILORS

Nicholas J. Chetta, M. D.
J. E. Clayton, M. D.
Guy R. Jones, M. D.
C. E. Boyd, M. D.
Frederick A. Marx, M. D.
John L. Beven, M. D.
J. Y. Garber, M. D.
R. E. C. Miller, M. D.

C. GRENES COLE, M. D., General Manager
1430 Tulane Avenue

Subscription Terms: $4.00 per year in advance, postage paid, for the United States; $5.00 per year for all foreign countries belonging to the Postal Union.

News material for publication should be received not later than the eighteenth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

Manuscripts should be addressed to the Editor, 1430 Tulane Ave., New Orleans, La.
The Journal does not hold itself responsible for statements made by any contributor.

Editorial

The Physician Abhors the Prospect of the Practice of Medicine Under the Police State

We are in a period of grave and rapid national change. The threat to the proper practice of medicine is serious. The machinery of government is controlled by those who would push us further down the road to socialism. The welfare state thus becomes a police state. These changes are being brought about by the efforts to encompass all medical care under the cloak of social security, the proposed so-called civil rights legislation, the furtherance of political objectives by executive order and, more important than all the others, the erosion of the Constitution. The physician is vitally concerned in this upheaval. He considers that the ethical practice of medicine is in danger. He sees that as a citizen his rights and liberties are shrinking.

The bearing which universal medical care coverage under social security would have on the profession has been discussed in these columns many times. A recent threat to the physician's right to practice what he regards as ethical medicine is contained in the dictatorial new civil rights legislation proposal and in the Supreme Court decisions dealing with race conflicts. It is common comment among those competent to judge and who are not furthering a political advantage that the Constitution, since 1935, has been construed in devious and fantastic ways in order to give support to court decisions which were never intended by its originators. Consequent upon this, legislation has been requested which would make possible federal coercion in the minutest details of our lives. This is to be accomplished under the guise of the prevention of racial discrimination.

The physician would be placed in the position of having to accept as patients those who presented themselves regardless of whether he wanted them as patients or not. Principles of medical ethics say that the physician may choose those

whom he would serve. In the event of a physician's refusal, disturbances would come in the office or the hospital. Local police would be of no avail because in a recent decision, the Supreme Court of the United States "suddenly divested local police authorities of their power to secure the conviction of persons guilty of inciting disorder." That is, "demonstrators" are immune from arrest if their agitation is on the basis of their alleged constitutional rights and racial discrimination. Under such circumstances as these, the physician would soon become a perfunctory servant of the police state. He would be working for a powerful administrative bureaucracy and not for what should be his primary concern; that is, the good of the patient.

The concern of the physician about his own rights as a citizen is even more important. Recently the President asked Congress to enact what is now designated as S-1731 and 1732, as sweeping and comprehensive pieces of civil rights legislation to prevent racial discrimination. These proposed bills were couched in somewhat general terms. Three days later a presidential executive order "EO-11114" covering the same topic was issued. This order was long and specific. In substance this executive order is a *de facto* bill enacted by presidential fiat and not by Congress.

George Washington said, "Government is like a fire, which, if it is properly controlled will light your homes and cook your food and run your factories, but if it is not controlled it will destroy you." This statement should be seriously pondered, and while so doing one should reflect on what President Kennedy recently said: "Every American ought to have the right to be treated as he should wish to be treated." This is the equivalent of saying that when the rights and wishes of one group conflict with the rights and wishes of another group, "mobocracy" is to be in power.

In this steady erosion of what used to be our constitutional rights, our liberties are being lost by unobserved attrition. We as citizens and physicians do not wish to lose what remaining rights we have nor to live under a police state. There is a hope that a way of conservatism and resentment against this type of usurpation of government authority may reach adequate expression, and one such expression is what is called the Liberty Amendment. This amendment, if adopted, would stop much of the erosion of individual liberty, take the government out of business, stop the personal income tax but keep the corporation income tax, reassert in effect that the Constitution means what it says. This amendment has already been passed by six states. They are Louisiana, Texas, Wyoming, Nevada, Georgia, and South Carolina. Its provisions are not regarded with complacency by the powers that be. Its further support and possibly ultimate enactment would protect the citizen against certain forms of government encroachment. If ratified, it would serve as a nucleus to encourage other amendments. Such would be necessary to insure the citizen against encroachment on his personal liberty.

ORGANIZATION SECTION

The Executive Committee dedicates this section to the members of the Louisiana State Medical Society, feeling that a proper discussion of salient issues will contribute to the understanding and fortification of our Society.

An informed profession should be a wise one.

REPORT ON ACTIONS OF THE HOUSE OF DELEGATES, AMERICAN MEDICAL ASSOCIATION, 112th ANNUAL MEETING

June 16-20, 1963, Atlantic City

Enlargement of the Board of Trustees, the sections and scientific program of the AMA, interns and residents, a new Institute for Biomedical Research, a physician's pension plan and the relation between tobacco and disease were among the major subjects acted upon by the House of Delegates at the American Medical Association's 112th Annual Meeting held June 16-20 in Atlantic City.

Dr. Norman A. Welch of Boston, member of the House of Delegates since 1951 and Speaker of the House since 1959, was named President-Elect of the Association by acclamation. Dr. Welch will become President at the June, 1964 annual meeting in San Francisco, succeeding Dr. Edward R. Annis of Miami, Florida who assumed office at the Tuesday night inaugural ceremony in Atlantic City.

The AMA 1963 Distinguished Service Award was voted to Dr. Lester R. Dragstedt of Gainesville, Florida, research professor of surgery at the University of Florida School of Medicine, for his achievements in the fields of education, research and practicing surgery.

Final registration figures at the meeting reached a grand total of 36,811, including 12,924 physicians.

Board of Trustees

The House adopted amendments to the Constitution and Bylaws designed to implement the recommendations presented in June, 1962, by the Ad Hoc Committee on the Board of Trustees. The changes will increase the size of the Board from 11 members to 15 members, by adding three elected trustees and including the immediate past president for a one-year term. The amendments also set the term of office for elected Board members at three years and limited the number of terms to three, for a maximum total of nine years service. In approving the amendments, the House expressed the opinion that enlargement of the Board of Trustees "would improve communications between the Board and the Association" and that the proposed changes "would be consistent with the increase in membership of the Association and with the increase of the size of the House of Delegates."

AMA Sections and Scientific Program

In considering the report of the Ad Hoc Committee to study the Board of Trustees Report on the Sections and Scientific Program of the AMA, originally presented at the 1962 Clinical Meeting in Los Angeles, the House disagreed with some recommendations in both of those reports.

Major change was the House decision that all section officers—chairman, vice chairman, delegate, alternate delegate, secretary, assistant secretary and representative to the scientific exhibits—should be elected by members of the section and that no officers be appointed by the AMA Board of Trustees.

In another change, relating to nominations for specialty boards, the House approved the following recommendation: "The Committee of the Council on Scientific Assembly of the appropriate section shall nominate the AMA representatives to serve on the medical specialty certifying board. These nominations shall be submitted to the Board of Trustees."

In connection with section registration, the House decided that "a member of a section who desires to change his registration from one section to another because of a change in his specialty, shall be required to inform AMA Headquarters by written notice of this intention at least sixty days in advance of the Annual Meeting."

The House agreed with the Ad Hoc Committee's recommendation that the Section on Gastroenterology and Proctology be renamed the "Section on Gastroenterology" and that a separate "Section on Proctology" be established.

The House also commended the Board of Trustees for its recommendation that a national forum be sponsored by the AMA in which representatives of national medical specialty societies and the Academy of General Practice will participate. The Board of Trustees was directed to implement this suggestion as early as possible.

Interns and Residents

The House disapproved the report of the Council on Medical Service and the Council on Medical Education and Hospitals on Compensation of House Officers. In so doing, it adopted the following statement:

"We therefore recommend that in view of the overwhelming opposition to the basic proposal contained in the report of the Council on Medical Service and the Council on Medical Education and Hospitals, the AMA record itself as opposed to any system or program by which any

part of an intern's or resident's salary is paid out of fees collected by the attending physician or out of fees collected under any type of medical-surgical insurance coverage."

The House, while declaring that the joint council report "represents a well-intentioned effort to find a solution to a most difficult, if not impossible, problem," recommended that any future proposals on the compensation of house officers be thoroughly studied by the Law Department and Judicial Council before submission to the House of Delegates.

In another action, related to the controversial "25% rule," the House approved a revision of the Essentials of an Approved Internship which deletes the requirement for any stated proportion of foreign medical graduates and graduates of American and Canadian medical schools as an essential feature of any internship program.

New Research Institute

In acting upon two reports from the AMA Education and Research Foundation, the House approved the Foundation's announcement that it will establish and operate a new Institute for Biomedical Research.

The Institute will concern itself with intensive and fundamental study of life processes particularly as related to intracellular mechanisms. It will be composed of groups of dedicated, imaginative workers who are capable of significant scientific achievements through the interaction of their intellects and experiences, with unmatched facilities and maximum freedom from external pressures.

The Institute will be dedicated to pure, basic, non-disease oriented research, and it will not render medical service to patients and will not conduct a graduate training program leading to a degree. It is contemplated that the first research group should be functioning by early 1965.

Physicians' Pension Plan

The House approved establishment of an AMA physicians' pension plan under the provisions of the Self-Employed Individuals' Retirement Act of 1962, and noted that the Board of Trustees will make every effort to begin operation of the plan before the end of 1963 so that physicians will be able to participate this year.

The plan will be open to all AMA members and their employees who can qualify under the Act, Public Law 87-792 (Keogh Law).

The law allows a self-employed individual to set aside up to $2,500 or 10% of his annual income, whichever is less, in a retirement fund, with the first $1,250 being deductible. The individual must provide proportionate benefits for any employee who works for him more than 20 hours a week and more than five months each year.

Tobacco and Disease

The House agreed with a Board of Trustees report which concluded that the AMA should defer any definitive statement regarding the relationship of tobacco and disease. The report pointed out that the AMA is continuing its study of this important subject and is merely deferring any public pronouncement pending the availability of more information, including whatever may come from the study of a committee appointed by the United States Public Health Service.

In taking this action, the House declared that extensive research is still necessary for the complete answers on the cause and effect of many toxins, including tobacco. However, the House said that the AMA "has a duty to point out the effects on the young of the use of toxic materials, including tobacco, and these facts should be disseminated, particularly in our schools."

Miscellaneous Actions

In considering a wide variety of resolutions and reports, the House also:

Disapproved a Judicial Council opinion on the dispensing of glasses by ophthalmologists and reaffirmed the Council's interpretation of Section 7 of the Principles of Medical Ethics, as reported in the November 15, 1958 issue of the Journal of the American Medical Association.

Approved a Judicial Council opinion on physician ownership of drugstores, drug repackaging houses and pharmaceutical companies.

Approved of AMA participation in the recent formation of a Joint Commission on Medicine and Pharmacy.

Agreed with the Council on Legislative Activities that the House should take no official position on the "Liberty Amendment" but should call it to the attention of individual physician citizens.

Disapproved of federal funds for staffing new community mental health centers.

Took a position opposing the student loan provisions of the Health Professions Educational Assistance Act of 1963.

Urged all state and county medical societies to adopt and activate all phases of "Operation Hometown."

Recommended that local medical societies in the vicinity of medical schools assume the responsibility of establishing and maintaining clear lines of communication with medical students.

Approved the organization of the National Council for the Accreditation of Nursing Homes, jointly sponsored by the AMA and the American Nursing Home Association.

Adopted the recommendations of the Committee to Study the Joint Commission on the Accreditation of Hospitals and suggested that the committee's report be distributed to constit-

uent and component societies and hospital chiefs of staff.

Approved an alteration in the Association Bylaws which states: "The Council on Medical Education and Hospitals shall consist of 10 Active or Service members at least one of whom shall be a private practitioner of medicine who is not a faculty member of a medical school nor a member of a staff of a hospital associated with a medical school or university."

Commended the American Farm Bureau for its vigorous leadership in opposing unwarranted government interference and regulation.

Urged the widest dissemination to AMA members of a joint report by the AMA Council on Mental Health and the National Academy of Sciences-National Research Council on The Use of Narcotic Drugs in Medical Practice and the Medical Management of Narcotic Addicts.

Recommended that all AMA members and affiliates give strong support to the national tuberculin testing campaign proposed by the American School Health Association.

Directed the Speaker of the House to appoint an ad hoc committee to study the size, make-up and functions of the House of Delegates, its councils, sections and committees and to report its findings in June, 1964.

Opening Session

Dr. George M. Fister of Ogden, Utah, retiring AMA president, told the opening session that "our fight against federal dictation is not merely one of concern only to physicians and their freedom to practice the best medicine possible, but it also concerns, equally or more so, the individual citizen, all professions and the private enterprise system in this country." Awards announced were the AMA Scientific Achievement Award to John F. Enders, Ph.D., of Boston, and the Joseph Goldberger Award in Clinical Nutrition to Dr. John B. Youmans of New York City.

Inaugural Ceremony

Dr. Annis, in his inaugural address Tuesday night, stressed the importance of maintaining an attitude of individualism among the physicians of America, and he urged members of the profession to have the courage and individuality to fight for all political, economic and professional freedoms. The Distinguished Service Award was presented to Dr. Dragstedt, and the Scientific Achievement Award was presented to Dr. Enders.

Wednesday Session

Speaking at the Wednesday session, Dr. Annis declared that "now, more than ever before, there is an obligation for all of us to waive or at least to minimize any differences between or within regions, specialties or organizations and to stand together on fundamental principles of medical care and medical practice, of enterprise and of freedom for which our great Association has striven in the last 116 years."

Election of Officers

In addition to Dr. Welch, the new president-elect, the following officers were named at the closing session on Thursday:

Dr. D. F. Ward of Dubuque, Iowa, vice president; Dr. Milford O. Rouse of Dallas, Texas, speaker of the House, and Dr. Walter C. Bornemeier of Chicago, vice speaker.

Dr. Percy Hopkins of Chicago and Dr. Raymond M. McKeown of Coos Bay, Oregon, were re-elected to the Board of Trustees for three-year terms. Dr. Robert C. Long of Louisville, Kentucky, was named to fill the one year remaining in the term of Dr. Hugh H. Hussey, who resigned to become director of the AMA Division of Scientific Activities.

Elected to the three new posts on the Board, created by the House action on Wednesday, were Dr. Dwight Wilbur of San Francisco, three years; Dr. Lester Bibler of Indianapolis, two years, and Dr. L. O. Simenstad of Osceola, Wisconsin, two years.

Nominated and elected to the Judicial Council was Dr. Walter Judd of Minneapolis, physician, former member of Congress and 1961 winner of the AMA Distinguished Service Award.

For the Council on Constitution and Bylaws, Dr. William D. Stovall of Madison, Wisconsin, was re-elected, and Dr. Thurman B. Givan of Brooklyn, New York, was named to replace Dr. Bornemeier.

Elected to the Council on Medical Education and Hospitals were Dr. Bryce Robinson, Jr., of Fairfield, Alabama; Dr. Francis L. Land of Fort Wayne, Indiana, and Dr. Melvin Breese of Portland, Oregon.

To fill vacancies in the Council on Medical Service, the House elected Dr. Burns A. Dobbins, Jr., of Fort Lauderdale, Florida; Dr. Irwin E. Hendryson of Denver, Colorado, and Dr. Jess W. Read of Tacoma, Washington.

By acclamation at the opening session, the House also expressed appreciation for the services of Mr. C. Joseph Stetler, the Association's general counsel and director of the Legal and Socio-Economic Division, who will be leaving July 1st to become executive vice president and general counsel of the Pharmaceutical Manufacturers Association.

MEDICAL NEWS SECTION

CALENDAR

PARISH AND DISTRICT MEDICAL SOCIETY MEETINGS

Society	Date	Place
Ascension	Third Tuesday of every month	
Calcasieu	Fourth Tuesday of every other month	Lake Charles
East Baton Rouge	Second Tuesday of every month	Baton Rouge
Jefferson	Third Thursday of every month	
Lafayette	Second Tuesday of every month	Lafayette
Lafourche	Last Tuesday of every other month	
Morehouse	Third Tuesday of every month	Bastrop
Natchitoches	Second Tuesday of every month	
Orleans	Second Monday of every month	New Orleans
Ouachita	First Thursday of every month	Monroe
Rapides	First Monday of every month	Alexandria
Sabine	First Wednesday of every month	
Tangipahoa	Second and fourth Thursdays of every month	Independence
Second District	Third Thursday of every month	
Shreveport	First Tuesday of every month	Shreveport
Vernon	First Thursday of every month	

POSTGRADUATE COURSE IN INTERNAL MEDICINE

The Alton Ochsner Medical Foundation will present a Postgraduate Course entitled "Newer Concepts in Internal Medicine". The course is scheduled to be held at the Ochsner Foundation Hospital, 1516 Jefferson Highway, New Orleans, Louisiana from Thursday, April 16th through Saturday the 18th, 1964.

SPECIAL CITATION TO FORMER OFFICIAL OF THE SOUTHERN MEDICAL ASSOCIATION

The Board of Trustees of the American Medical Association presented a special citation to Mr. C. P. Loranz, Birmingham, Ala., former Secretary-Manager of the Southern Medical Association, during the first session of the House of Delegates on June 17, 1963, Atlantic City, N. J., as a tribute to his unique contribution to medicine. The presentation was made by Dr. Milford O. Rouse, Dallas, Texas, Vice Speaker of the House of Delegates of the American Medical Association, and Dr. J. P. Culpepper, Jr., Hattiesburg, Miss., Vice President and member of the Board of Trustees of the American Medical Association. Mr. Robert F. Butts, Birmingham, Ala., Executive Director of the Southern Medical Association, received the citation on behalf of Mr. Loranz who was unable to be present.

Mr. Loranz, who has been called the "Dean of Medical Society Administrators," was the first layman to serve in an executive capacity with a medical organization. His employment with the Southern Medical Association began in October 1912 and he has served the profession of medicine with honor and devotion since that time. Though retired, Mr. Loranz continues to serve in the capacity of Advisor and Special Consultant for the Southern Medical Association.

POSTGRADUATE COURSE IN AGING OF THE LUNG

Hahnemann Medical College and Hospital will sponsor its tenth Symposium "Aging of the Lung: Perspectives", Sheraton Hotel, Philadelphia, November 18-20, 1963.

The primary purpose of this meeting is to consider recent developments in the biochemistry, morphology and physiology of aging as it relates to the lung. The formal presentations will thus serve as a basis, not only to summarize the present status, but also to delineate unsolved problems.

POST-DOCTORAL FELLOWSHIPS IN ALLERGY

The Allergy Foundation of America announces the availability of four post-doctoral fellowships in research and clinical allergy.

These fellowships, which are for two years, were established to prepare a group of promising young physicians for research, hospital and university careers in allergy.

Recipients will receive intensive and highly specialized advanced training in research and clinical allergy, thus equipping them to become leaders in this rapidly expanding field.

Candidates must be graduates of approved medical schools and must have completed at least two years of hospital internship training. They are expected to divide their time between research work and clinical training in allergy as arranged with the preceptor.

At present four Fellowships are available under the following preceptors:

Rudolph L. Baer, M. D., Professor and Chairman, Department of Dermatology, New York University Post-Graduate Medical School, 550 First Avenue, New York 16, N. Y.

Dan H. Campbell, Ph.D., Department of Im-

munology and Chemistry, California Institute of Technology, Pasadena, California.

Frank J. Dixon, M. D., Head, Division on Experimental Pathology, Scripps Clinic and Research Foundation, Prospect Street, La Jolla, California.

Francis C. Lowell, M. D., Chief of Allergy, Massachusetts General Hospital, Boston 14, Massachusetts.

The stipend for the first year is $5400; for the second year, $6300; laboratory and travel expenses for the two year period, $800.

The awards are made by the Board of Directors of the Foundation on the recommendations of its Scientific and Educational Council.

Requests for applications should be sent directly to the Secretary of the Scientific and Educational Council, Allergy Foundation of America, 801 Second Avenue, New York 17, N. Y. At the same time each applicant should indicate which of the Fellowships is his first choice.

SECTION CHAIRMEN AND VICE-CHAIRMEN THE NEW ORLEANS GRADUATE MEDICAL ASSEMBLY

Twenty-Seventh Annual Meeting
March 2, 3, 4, 5, 1964

ANESTHESIOLOGY
Dr. John Adriani, Chairman
Dr. John B. Parmley, Vice-Chairman

DERMATOLOGY
Dr. Vincent J. Derbes, Chairman
Dr. William J. Perret, Vice-chairman

GASTROENTEROLOGY
Dr. Murrel H. Kaplan, Chairman
Dr. Jules Myron Davidson, Vice-chairman

GENERAL PRACTICE
Dr. Rafael C. Sanchez, Chairman
Dr. Mannie D. Paine, Jr., Vice-chairman

GYNECOLOGY
Dr. C. Gordon Johnson, Chairman
Dr. O. R. Depp, Vice-chairman

INTERNAL MEDICINE
Dr. Robert R. Burch, Chairman
Dr. Walter S. Culpepper, Vice-chairman

NEUROPSYCHIATRY
Dr. Theo A. Watters, Chairman
Dr. Robert C. Lancaster, Vice-chairman

OBSTETRICS
Dr. Simon V. Ward, Chairman
Dr. John A. King, Vice-chairman

OPHTHALMOLOGY
Dr. Wm. McDonald Boles, Chairman
Dr. Horace B. Dozier, Vice-chairman

ORTHOPEDIC SURGERY
Dr. Jack K. Wickstrom, Chairman
Dr. James L. LeNoir, Vice-chairman

OTOLARYNGOLOGY
Dr. Charles L. Cox, Chairman
Dr. George J. Taquino, Jr., Vice-chairman

PATHOLOGY
Dr. William H. Harris, Jr., Chairman
Dr. Leslie Ray Bryant, Jr., Vice-chairman

PEDIATRICS
Dr. C. Harrison Snyder, Chairman
Dr. John Henry Dent, Vice-chairman

RADIOLOGY
Dr. Lester W. Eavenson, Chairman
Dr. Joseph N. Ane, Vice-chairman

SURGERY
Dr. Claude C. Craighead, Chairman
Dr. Isidore Cohn, Jr., Vice-chairman

UROLOGY
Dr. Gilbert C. Tomskey, Chairman
Dr. A. Miles Pratt, II, Vice-chairman

NEW FILM ON OBESITY AVAILABLE

A new film entitled "Obesity: Some Highlights of Management," is being made available by E. R. Squibb & Sons, Division of Olin Mathieson Chemical Corporation. The lecture-type film, delivered by Dr. Garfield G. Duncan, Professor of Medicine, University of Pennsylvania, points out that obesity is a leading menace to health and longevity and is one of the greatest challenges in the practice of medicine. Designed for viewing by professional medical audiences, the film highlights some methods employed by Dr. Duncan and his colleagues in the management of obesity. Dr. Duncan is also Director, Medical Divisions, Pennsylvania Hospital and Benjamin Franklin clinic.

The black and white sound film runs 20 minutes and is available at no charge from all Squibb regional offices, or by writing the New York office at 745 Fifth Avenue.

CHEST PHYSICIANS PLAN CONGRESS IN MEXICO CITY

The Eighth International Congress on Diseases of the Chest, sponsored by the Council on International Affairs of the American College of Chest Physicians, will be held in Mexico City, October 11 through 15, 1964.

The congress will be presented with the cooperation of the Mexican Chapter of the College and under the patronage of the Government of Mexico. It will be held in the Congress Building at the new Medical Center in Mexico City.

Dr. Donato G. Alarcon, Regent of the College for Mexico, and Dean of the Faculty of Medicine of the University of Mexico, will serve as President of the congress.

The congress will open on Sunday, October 11, with registration, executive sessions, international committee meetings and the Inaugural

Ceremony in the evening. The scientific program will commence on Monday, October 12, and will include formal papers, panel discussions, motion pictures, and scientific and technical exhibits.

Fireside Conferences will be presented on Monday evening. The scientific program will continue to Thursday noon, October 15. A banquet and dance will be held on Wednesday, October 14.

Additional information may be obtained by writing Mr. Murray Kornfeld, Executive Director, American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

BOOK REVIEWS

A Primer of Cardiology; by George E. Burch, M. D., F. A. C. P., 3rd ed. Lea and Febiger, Philadelphia, 1963. 366 p. $6.00.

The third edition of this basic cardiology textbook which according to the author is "intended for medical students, beginners in cardiology, and physicians in training in general internal medicine and general practice", preserves the original format of this widely-read work. The author well adheres to his stated desire to present a "simple, direct, clinical, practical presentation". The principle addition to this printing is a discussion on dye dilution and other tracer curves which are being increasingly utilized in the diagnosis of congenital cardiac defects.

As in the previous editions, Dr. Burch presents a brief but adequate description of cardiovascular anatomy, circulation and some aspects of physiology. This is correlated with clinical and roentgenologic evaluations of the heart and its disease. Numerous illustrations are provided to facilitate the understanding of this aspect of the primer, some of which represent additions from the previous texts.

Dr. Burch presents his classification of clinical diagnostic cardiac categories together with a summary of the diagnostic signs and symptoms of cardiac disease. In doing this, he utilizes the physiologic approach to facilitate clinical correlation.

In subsequent chapters the author discusses the various types of cardiac diagnoses, emphasizing their clinical characteristics and briefly discussing therapeutic considerations in some cases. A new addition to the text is a discussion of pulmonary heart disease and cor pulmonale in considerable detail. Cardiac arrhythmias and bedside diagnosis with a physiologic correlation, occupies a significant part of this edition as it has in the past in Dr. Burch's book. In this respect the author presents his recommendations for the treatment of these arrhythmias; no extensive electrocardiographic correlation is presented in this edition.

In the final pages of the third edition of this primer, Dr. Burch presents detailed suggestions for the diets of cardiac patients.

The third edition of the "Primer of Cardiology" should receive the acceptance of its predecessors and will certainly succeed in its purposes as stated by the author in his preface.

ARNOLD M. LUPIN, M. D.

PUBLICATIONS RECEIVED

Funk & Wagnalls Company, Inc., N. Y.: Alone No Longer; The Story of a Man Who Refused to Be One of the Living Dead, by Stanley Stein (with Lawrence G. Blochman).

Grune & Stratton, N. Y.: The Psychology of Meaningful Verbal Learning, An Introduction to School Learning, by David P. Ausubel.

The C. V. Mosby Co., St. Louis: Handbook of Pediatric Medical Emergencies, by Adolph G. DeSanctis, M. D. and Charles Varga, M. D., with Contributors (3rd edit.).

Roche Laboratories, Nutley, N. J.: The Pediatric Patient—1963, consulting editor, David Baird Coursin, M. D., coordinating editor, Sarah R. Gustafson, Ph.D.

Charles C Thomas, Publisher, Springfield, Ill.: Broken Long Bone, Its Bionomics and Man, by Robert T. McElvenny, M. D. with illustrations and additions by Ned Murray Grove, M. D.

W. B. SAUNDERS COMPANY features the following new editions in their full page advertisement appearing elsewhere in this issue:

BEESON and McDERMOTT — CECIL-LOEB TEXTBOOK OF MEDICINE

The New (11th) Edition of a world-famous text, with contributions by 173 authorities and details of over 800 diseases.

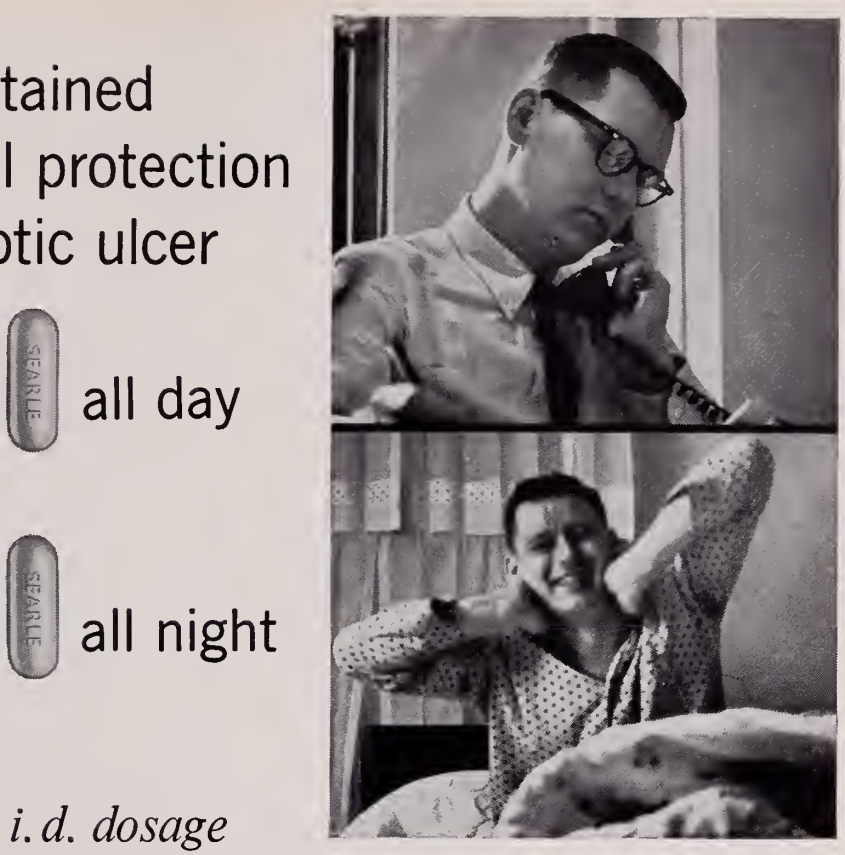
GRAHAM — THE CYTOLOGIC DIAGNOSIS OF CANCER

An up-to-date revision explaining what can be learned from suspected smears through accurate laboratory methods.

MAYO CLINIC—CLINICAL EXAMINATIONS IN NEUROLOGY

A famous medical center's working blueprint to effective neurologic examination.

Sustained high-level protection in peptic ulcer



SEARLE all day

SEARLE all night

with b.i.d. dosage

PRO-BANTHĪNE P.A.®

Brand of PROPANTHELINE Bromide

Prolonged-Acting Tablets—30 mg.

Pro-Banthīne P.A. provides the full anticholinergic benefit of Pro-Banthīne® plus the greater convenience and more consistent therapeutic effect of a long-acting dosage form.

Asher[1] has summarized the advantages of prolonged-action dosage forms: "First, they should be of great value in the suppression of night acid secretion in the ulcer patient. Also, in the ulcer patient, with high acid secretion during the day these drugs should be of help when used with regular doses of shorter-acting anticholinergic agents. A third application is in the chronic treatment of certain patients whose tendency to recurrent ulcer has been established."

Pro-Banthīne P.A. offers consistent, sustained anticholinergic effects for more consistent suppression of acid secretion and motility on simple twice or thrice daily dosage in most patients.

G.D. SEARLE & CO.
CHICAGO 80, ILLINOIS
Research in the Service of Medicine

Suggested Adult Dosage:
One tablet at bedtime and one in the morning, supplemented, if necessary, by additional tablets of Pro-Banthīne P.A. or standard Pro-Banthīne to meet individual requirements.

Pro-Banthīne P.A.
is supplied as capsule-shaped, peach-colored tablets of 30 mg. each.

Contraindications:
Glaucoma; severe cardiac disease.

Possible Side Actions:
Xerostomia, mydriasis and, occasionally, hesitancy in urination. Theoretically, a curare-like action may occur.

1. Asher, L. M.: The Choice of Anticholinergic Drugs in the Treotment of Functionol Digestive Diseases, Amer. J. Dig. Dis. 4:260-275 (April) 1959.



Whether your muscle-injury patient is a professional athlete or just a weekend golfer, you can expect rapid results with 'Soma' (carisoprodol).

This unique drug breaks up both muscle spasm and pain at the same time. Onset of action takes only 30 minutes, and your patient will usually begin to feel better within hours.

As Conant demonstrated in a study of 106 patients with musculoskeletal injuries, 88% of the patients treated with 'Soma' (carisoprodol) achieved good to excellent results. *(Clinical Medicine,* March, 1962.)

Carisoprodol seldom produces side effects. Occasional drowsiness may occur, usually at higher than recommended dosage. Individual reactions may occur rarely.

For severe athletic strains or everyday sprains, you can rely on 'Soma' (carisoprodol) to help speed recovery with notable safety.

USUAL DOSAGE: ONE 350 MG. TABLET Q.I.D.

The muscle relaxant with
an independent pain-relieving action

Soma®
carisoprodol

Wallace Laboratories, Cranbury, New Jersey





For dramatic restoration

WINSTROL®

brand of STANOZOLOL

Oral anabolic therapy with this new physiotonic helps restore the patient's: positive protein metabolism; confidence, alertness and sense of well-being.

WINSTROL (stanozolol/Winthrop), a heterocyclic steroid, combines highest potency* with outstanding tolerance, stimulates appetite and promotes weight gain... restores a positive metabolic balance. It counteracts the catabolic effects of concomitant corticosteroid or ACTH therapy. WINSTROL (stanozolol/Winthrop) rebuilds body tissue while it builds strength, confidence and a sense of well-being in conditions associated with excess protein breakdown, insufficient protein intake and inadequate nitrogen and mineral retention.

Side Effects and Precautions: Prolonged administration can produce mild hirsutism, acne or voice change. In an occasional patient, edema has been observed and in young women the menstrual periods have been milder and shorter. These side effects are reversible, and patients receiving prolonged treatment should be examined and questioned periodically so that, should side effects appear, the dosage may be reduced or administration of the drug discontinued for a time.

In patients with impaired cardiac and renal function, there is the possibility of sodium and water retention. Liver function tests may reveal an increase in bromsulphalein retention, particularly in elderly patients. In such cases, therapy should be discontinued. Although it has been used in patients with cancer of the prostate, its mild androgenic activity is considered by some investigators to be a contraindication.

Dosage: Usual adult dose, 1 tablet t.i.d. before or with meals; young women, 1 tablet b.i.d.; children (school age): up to 1 tablet t.i.d.; children (preschool age): ½ tablet b.i.d. Available as scored tablets of 2 mg. in bottles of 100. For best results, administer with a high protein diet.

*ANIMAL DATA

Rx WINSTROL
(stanozolol/Winthrop) whenever anabolic therapy is indicated

Winthrop

Winthrop Laboratories, New York 18, New York

Browne-McHardy Clinics

MAIN CLINIC
3636 St. Charles Ave.
New Orleans 15, La.
TWinbrook 9-2376

GRAVIER ST. DIVISION
630 Gravier St.
New Orleans 12, La.
524-1605

VETERANS HIGHWAY DIVISION
8601 Veterans Memorial Hwy.
Metairie, La.
VErnon 3-7341

INTERNAL MEDICINE
Cardiology
Endocrinology
Gastroenterology
Hematology
Rheumatology

Donovan C. Browne, M. D.
Wiley H. Jenkins, M. D.
Robert C. Judice, M. D.
John T. Leckert, M. D.
G. Gordon McHardy, M. D.
Robert J. McHardy, M. D.
Swan S. Ward, M. D.
George E. Welch, M. D.
Guy T. Williams, M. D.

DERMATOLOGY
William Burroughs, M. D.

DISEASES OF THE CHEST
Joseph E. Blum, Jr., M. D.

EAR, NOSE and THROAT
Norma Kearby, M. D.

GENERAL SURGERY
Claude C. Craighead, M. D.
Raul G. Reyes, M. D.

OBSTETRICS and GYNECOLOGY
C. Gordon Johnson, M. D.
Robert I. Ayerst, M. D.
James M. Todd, Jr., M. D.

OPHTHALMOLOGY
Oliver H. Dabezies, M. D.

INDUSTRIAL MEDICINE
Ralph J. McDonough, M. D.
Albert W. Auld, M. D.

PEDIATRICS
Carl E. Kemmerly, M. D.
Milton H. Donaldson, M. D.

RADIOLOGY and RADIOTHERAPY
Charles O'Dowd Lilly, M. D.
Joseph B. Marino, M. D.
Walter McDowell, M. D.

UROLOGY
John F. Lally, M. D.

AUXILIARY SERVICES
Cytology
Diabetics
Electroencephalograph
Endoscopy
Medical Laboratory
Pharmacy
Physical Therapy
Pulmonary Function Studies

UNOPETTE DISPOSABLE BLOOD DILUTING PIPETTES

The disposable UNOPETTE Pipette makes it possible to collect blood anywhere with a minimum of equipment. It eliminates conventional rubber tubes and mouthpieces, potential reservoirs of infection for transmission of viral and microbial diseases.

UNOPETTE Pipettes eliminate, or greatly minimize the errors normally encountered in the use of conventional blood diluting pipettes.

They bring new convenience to blood collection and dilution by providing:

- Excellent capillary action.
- Automatic measurement of the volume of blood collected. Collection stops when the capillary tube reaches full capacity.
- A premeasured dilutent.
- Freedom from cleaning.

PEACOCK
SURGICAL COMPANY INC.
1235 TEXAS AVENUE
SHREVEPORT, LOUISIANA



For your elderly arthritic patients



AN EFFECTIVE GERIATRIC ANTIARTHRITIC WITH DISTINCTIVE SAFETY FACTORS

safely indicated – even when **OSTEOPOROSIS** is present

PABALATE-SF, which has been found "superior to aspirin in the treatment of chronic rheumatic disorders,"[1] possesses distinctive **Safety Factors** for elderly arthritics, even when osteoporosis is present: (1) its potassium salts cannot contribute to sodium retention; (2) its enteric coating assures gastric tolerance; and (3) it does not produce the serious reactions often noted during therapy with steroids or pyrazolone derivatives.

In each persian-rose enteric-coated tablet: potassium salicylate, 0.3 Gm.; potassium para-aminobenzoate, 0.3 Gm.; ascorbic acid, 50 mg.

1. Ford, R. A., and Blanchard, K. P.: J.-Lancet 78:185, 1958.

Precaution: Occasionally, mild salicylism may occur, but this responds readily to dosage adjustment. In the presence of severe renal impairment, care should be taken to avoid accumulation of salicylate and PABA. Supply: Bottles of 100 and 500 enteric-coated tablets.

Pabalate®-SF

Robins

(the new, convenient way to prescribe Pabalate-Sodium Free)

A. H. ROBINS COMPANY, INC., RICHMOND, VIRGINIA



Protects your angina patient better than vasodilators alone

'Miltrate' contains both pentaerythritol tetranitrate, which dilates the patient's coronary arteries, and meprobamate, which relieves his anxiety about his condition. Thus 'Miltrate' protects your angina patient better than vasodilators alone.

Pentaerythritol tetranitrate may infrequently cause nausea and mild headache, usually transient. Slight drowsiness may occur with meprobamate and, rarely, allergic reactions. Meprobamate may increase effects of excessive alcohol. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Like all nitrate-containing drugs, 'Miltrate' should be given with caution in glaucoma.

Dosage: 1 or 2 tablets *before meals* and at bedtime. Individualization required.
Supplied: Bottles of 50 tablets.

CML-9646

Miltrate®

meprobamate 200 mg.+
pentaerythritol tetranitrate 10 mg.

WALLACE LABORATORIES / *Cranbury, N. J.*

reduce or obviate the need for transfusions and their attendant dangers

KOAGAMIN is indicated whenever capillary or venous bleeding presents a problem. KOAGAMIN has an outstanding safety record -- in 25 years of use no report of an untoward reaction has been received; however, it should be used with care on patients with a predisposition to thrombosis.



KOAGAMIN®

parenteral hemostat

Each cc contains: 5 mg. oxalic acid, 2.5 mg. malonic acid, phenal 0.25%; sodium carbonate as buffer.

Complete data with each 10cc vial. Therapy chart on request.

CHATHAM PHARMACEUTICALS, INC.
Newark 2, New Jersey
Distributed in Canada by Austin Laboratories, Ltd. • Paris, Ontario

there is nothing "new" about Thorazine®



brand of
chlorpromazine

In the nine years since it became available to American physicians, Thorazine (chlorpromazine, SK&F) has been more widely used, more thoroughly investigated and more extensively documented than any other agent of its type.

Its actions, effects—and side effects—are well known throughout the medical profession. Its efficacy has been clearly demonstrated. And when properly used, its advantages far outweigh any possible disadvantages.

This is why there is nothing "new" about Thorazine (chlorpromazine, SK&F). This is why it remains the first choice in many conditions—and the standard against which other agents are inevitably compared.

This is why it is one of the fundamental drugs in medicine.

SMITH KLINE & FRENCH
LABORATORIES, PHILADELPHIA

SK&F

blood, milk and Maalox®

(magnesium-aluminum hydroxide gel)

Practically standard treatment, now, for perforated ulcer. Why is Maalox included? Antacid therapy *must* continue long after the wound has healed, and patients started on Maalox tend to stay on Maalox. It tastes good; it's effective and will not cause constipation—three important reasons for Maalox over the long haul. Some physicians, we are told, order Maalox routinely for hospital patients on drugs which could irritate. They feel it reduces the likelihood of gastric discomfort. Supplied: Suspension; Tablets No. 1; Tablets No. 2. (Each Maalox No. 1 Tablet is equivalent to 1 teaspoonful and each Maalox No. 2 Tablet is equivalent to 2 teaspoonfuls of Suspension.)



ROER RORER WILLIAM H. RORER, INC., FORT WASHINGTON, PA.

Question:

"What is a tranquilaxant?"

Answer:

"A drug that is both a tranquilizer and a muscle relaxant."

TRANCOPAL®
brand of
chlormezanone
is a tranquilaxant

As a tranquilizer, TRANCOPAL (chlormezanone/Winthrop) "is effective in the symptomatic treatment of anxiety."[1] Its tranquilizing properties are similar to those of other mild tranquilizers.[1] Furthermore, it relieves tension of both mind and muscle without interfering with normal activity or alertness.

The muscle relaxant properties[2] of this drug provide an extra dimension of effectiveness...relaxing the spasm which so frequently accompanies psychogenic disorders. Hence, the total therapeutic effect of TRANCOPAL (chlormezanone/Winthrop)—a true "tranquilaxant"—is to produce a relaxed mind in a relaxed body.

Unsurpassed Tolerance: Less than 3 per cent of patients develop side effects with TRANCOPAL (chlormezanone/Winthrop), such as occasional drowsiness, dizziness, flushing, nausea, depression, weakness and drug rash. If severe, medication should be discontinued. In most patients, however, side effects are minor and do not necessitate interruption of treatment. There are no known contraindications.

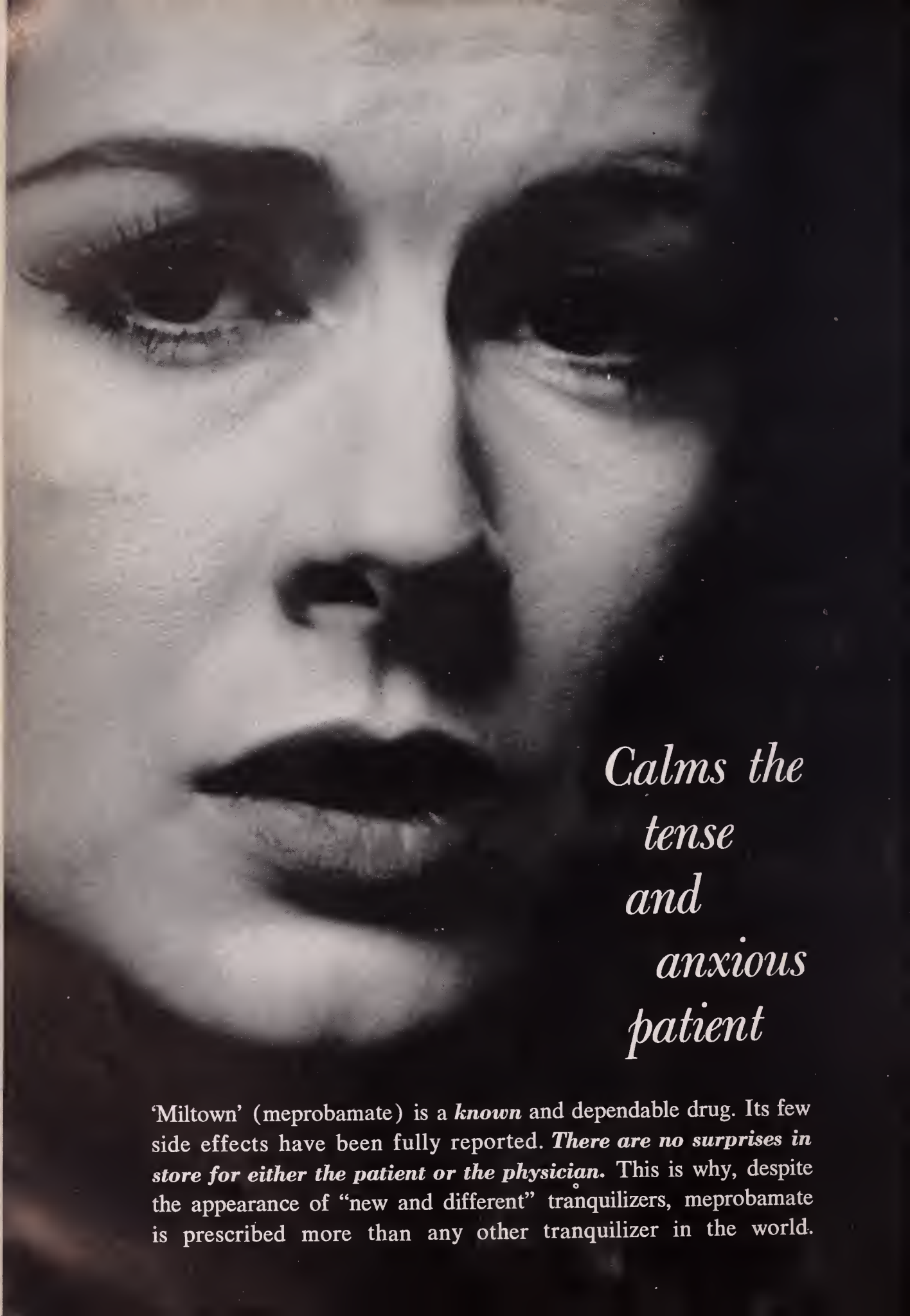
Available: 200 mg. Caplets® (green colored, scored), 100 mg. Caplets (peach colored, scored), each in bottles of 100.

Dosage: Adults, 1 Caplet (200 mg.) three or four times daily; in some patients 100 mg. three or four times daily suffices. Children (5 to 12 years), from 50 to 100 mg. three or four times daily.

Winthrop
WINTHROP LABORATORIES
New York 18, N.Y.

References: 1. A.M.A. Council on Drugs: J.A.M.A. 183:469 (Feb. 9) 1963. 2. Gruenberg, F.: Curr. Ther. Res. 2:1 (Jan.) 1960.

1785M



'Miltown' (meprobamate) is a ***known*** and dependable drug. Its few side effects have been fully reported. ***There are no surprises in store for either the patient or the physician.*** This is why, despite the appearance of "new and different" tranquilizers, meprobamate is prescribed more than any other tranquilizer in the world.

Clinically Proven

in more than 750 published clinical studies
and over eight years of clinical use

Outstanding Record of Effectiveness and Safety

1. Relieves anxiety and anxious depression in a broad spectrum of clinical conditions.
2. Doesn't leave patients "too groggy" to work or think or learn.
3. Relaxes both mind and skeletal muscle. Relieves physical tension as well as emotional stress.

Slight drowsiness may occur with meprobamate and, rarely, allergic reactions. Meprobamate may increase effects of excessive alcohol. Use with care in patients with suicidal tendencies. Massive overdosage may produce coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Withdraw gradually after prolonged use at high dosage.

Usual dosage: 1 or 2 400 mg. tablets t.i.d.

Supplied: 400 mg. scored tablets, 200 mg. sugar-coated tablets; bottles of 50.

the original meprobamate

Miltown®

WALLACE LABORATORIES / *Cranbury, N. J.*

CH-9339

Digitalis

in its completeness



Each pill is
equivalent to
one USP Digitalis Unit

Physiologically Standardized
therefore always
dependable.

Clinical samples sent to physicians upon request.

Davies, Rose & Co., Ltd.
Boston, 18, Mass.

INDEX TO ADVERTISERS

Ames Company, Inc. 14

Browne-McHardy Clinics 22
Burroughs Wellcome & Co. 12

Chatham Pharmaceuticals, Inc. 24

Davies, Rose & Co., Ltd. 30

Endo Laboratories 13

Glenwood Laboratories, Inc. 16

Katz & Besthoff, Ltd. 1

Lederle Laboratories 15
Lilly & Company, Eli Front Cover, 18
Louisiana Coca-Cola Bottling Co. 1
Louisiana State Board of Health Second & Third Covers

Majors Company, J. A. 1

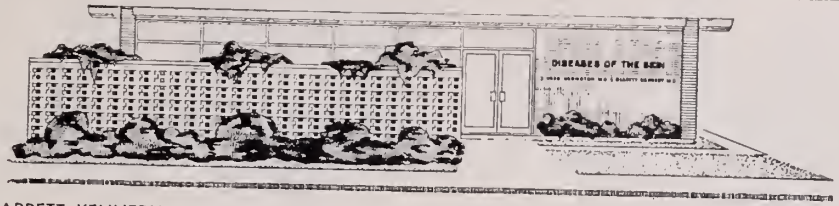
Parke, Davis & Company 6, 7
Peacock Surgical Co., Inc. 22
Professional Cards 31, 32
Professional Management Service 10

Robins Co., Inc., A. H. 3, 4, 5, 23
Roche Laboratories Back Cover
Rorer, Inc., William H. 26

Saunders Company, W. B. 11
Searle & Company, G. D. 19
Smith Kline & French Laboratories 25
Silver Hill Foundation, The 16

Wallace Laboratories 8, 9, 17, 20, 24, 28, 29
Winthrop Laboratories 2, 21, 27

PROFESSIONAL CARDS



Courtesy Parking

Adjacent to Building

BARRETT KENNEDY, M. D.

V. MEDD HENINGTON, M. D.

WM. J. PERRET, M. D.
(Associate)

DERMATOLOGY

4522 MAGNOLIA STREET

TWinbrook 1-4452 — 1-4453

Green Clinic

709 South Vienna Street — Ruston, Louisiana

Surgery
Marvin T. Green, M.D.
LaMoyne C. Bleich, M.D.

Obstetrics and Gynecology
Carl L. Langford, M.D.
David M. Hall, M.D.

Pediatrics
Bruce W. Everist, M.D.
O. Wharton Brown, Jr., M.D.

Eye, Ear, Nose and Throat
Harold H. Harms, M.D.

Radiology
M. Ragan Green, M. D.

Internal Medicine
Henry S. Roane, M.D.
Robert W. Sharp, M.D.
Joe L. Smith, Jr., M.D.

Dentistry
L. Felton Green, D.D.S.
Benjamin C. Baugh, D.D.

The Baton Rouge Clinic

134 North 19th St. — DI 8-5361

SURGERY
J. Sabatier, M. D.
Charles Mosely, M. D.
Charles S. Peter, Jr., M. D.

GYNECOLOGY & OBSTETRICS
Melvin Schudmak, M. D.
J. P. Griffon, M. D.
Donald C. Diefendorf, M. D.

UROLOGY
Mortimer Silvey, M. D.

GENERAL PRACTICE
Shirley J. Woodford, M. D.

INTERNAL MEDICINE
Charles Prosser, M. D.
Roger Reynolds, M. D.
(Allergy)
Bruce L. Baer, M. D.
(Gastroenterology)
Douglas Gordon, M. D.
(Endocrinology)
David D. Kahn, M. D.
(Hematology)

EYE
George H. Jones, M. D.

PHILIP RONALD LORIA, M. D.

DISEASES OF THE SKIN

Dermoplaning — **Removal of Excessive Hair**

1104 Maison Blanche Bldg.
By Appointment

New Orleans 16, La.
524-9621

PROFESSIONAL CARDS

JOHN C. HARDIN, JR.
D.D.S., M.D., F.A.C.S.
Maxillo-Facial & Oral Surgery
(Head and Neck Surgery)
121 Physicians & Surgeons Bldg., West
Phone 3-6901 Shreveport, Louisiana

BLAISE SALATICH, D.D.S., M.D.
PRACTICE LIMITED TO ORTHOPEDIC SURGERY
1212 Maison Blanche Building
JAckson 2-7697 By Appointment

DR. NATHAN H. POLMER
Physical Medicine—Rehabilitation
2209 Carondelet St.
2 - 5 P. M.
Off.: JA 2-0171 Res.: JA 2-3946

JAMES W. BURKS, JR., M. D.
DISEASES OF THE SKIN
SURGICAL PLANING FOR COSMETIC DEFECTS
FACILITIES FOR REMOVAL OF SUPERFLUOUS HAIR
925 Maison Blanche Bldg.
New Orleans 16, La. 529-3322

DR. R. ROSS, JR.
SKIN DISEASES
802 Pere Marquette Bldg. JA 2-0202

DR. RICHARD W. VINCENT
PLASTIC AND RECONSTRUCTIVE SURGERY
34 Maes Court — Medical Plaza
3600 PRYTANIA STREET
TWinbrook 5-4561

JUSTILLIEN H. FORET, M. D.
Practice Limited to Psychiatry
3706 Prytania Street
899-2618 By Appointment

CHARLES I. BLACK, M. D.
DISEASES OF THE SKIN
4550 North Boulevard DIckens 3-2841
Baton Rouge, Louisiana

Business Management Consultants
for Individual Practices, Groups and Clinics
PROFESSIONAL MANAGEMENT SERVICE
700 Maison Blanche Bldg.
524-1177 New Orleans 16, La.

HUGH MANY, M. D.
DISEASES OF THE SKIN
4900 St. Charles Avenue 895-6700
and
Nicholson-Baehr Clinic, Marrero, La.
By Appointment 341-1300

THE OWENS CLINIC
for
PLASTIC AND RECONSTRUCTIVE SURGERY
2223 Carondelet St. New Orleans 13, La.
Telephone: JAckson 2-0106
After Hours — Call Doctors' Exchange WH 5-4141

DR. HARTWIG M. ADLER
EYE, EAR, NOSE AND THROAT
Hours by appointment.
3439 Prytania Street TW. 1-4094
New Orleans

DR. CARL N. WAHL
Practice limited to
MAXILLO-FACIAL AND PLASTIC SURGERY
4500 Magnolia Street 891-6615

FRANK H. MAREK, M. D.
Radiologist
444 So. Ryan Street Lake Charles, La.
Phone HE 3-6361
Practice Limited to
X-ray and Radium Treatment and Diagnosis

DR. HARRY ZOLLER
HEARING AND DEAFNESS
DISEASES AND SURGERY OF THE EAR
1109 Pere Marquette Building
JA. 5-2535 By Appointment

JOHN H. COUNCE, M. D.
Diseases of the Skin
1413 Delachaise St. New Orleans
Office Hours
By Appointment TW 1-2813

FREDERIC W. BREWER, M. D.
PRACTICE LIMITED TO PSYCHIATRY
1008 Maison Blanche Building
JA 5-4047 By Appointment

The Cancer Commission of the Louisiana State Medical Society



BREAST CANCER will strike one of every twenty women in the United States. At present rates, less than half of them will be cured.

Breast cancer is a disease of immense frustration for the physician... and is one of woman's deepest fears. Yet, for the individual patient, there *is* hope. Five-year cures result in 82% of *localized* cases.

Monthly breast self-examination and annual health checkups are essential in uncovering such cases. Essential, too, is person-to-person exchange between doctor and patient, to give women a chance to resolve their anxieties about this disease... anxieties which paralyze judgment and delay life-saving action.

The Society's newest film, "Breast Self-Examination," has been highly praised by physicians and laymen. A physician is present at each showing so that women may ask questions and be influenced to see their own doctors promptly about any breast problem.

The Society is working intensively on the breast cancer problem, through research and education. Through our concerted efforts... yours, doctor, and ours... we *will* prevail against this great enemy.

AMERICAN CANCER SOCIETY®

LOUISIANA DIVISION, INC.
204 Delta Building New Orleans 12, La.

Louisiana State Board of Health

Formerly nervous and tense,
now better able to...

make decisions



This, in essence, is what happens when you place a patient on Librium (chlordiazepoxide HCl). Since this agent generally relieves anxiety and tension without dulling mental clarity or inducing drowsiness, most patients become better able to function normally, take an active interest in family and surroundings, meet and solve daily problems. This antianxiety agent is virtually free from extrapyramidal side effects, and does not produce or deepen depression.

Anxiety and tension relieved
Alertness maintained

Librium®

(chlordiazepoxide HCl) ROCHE®

the successor to the tranquilizers

ROCHE

Dosage: Usual adult dose in mild to moderate anxiety and tension is 5 or 10 mg, 3 or 4 times daily; in severe anxiety and tension, 20 or 25 mg, 3 or 4 times daily. Side effects: Drowsiness and ataxia, usually dose-related, have been reported in some patients—particularly the elderly and debilitated. Paradoxical reactions, *i.e.*, excitement, stimulation, elevation of affect and acute rage, have been reported in psychiatric patients; these reactions may be secondary to relief of anxiety and should be watched for in the early stages of therapy. Other side effects, usually dose-related, have included isolated instances of minor skin rashes, minor menstrual irregularities, nausea, constipation, increased and decreased libido. Precautions: In elderly, debilitated patients, limit dosage to smallest effective amount to preclude development of ataxia or oversedation (not more than 10 mg per day initially, to be increased gradually as needed and tolerated). Until the correct maintenance dosage is established, patients receiving this agent should be advised against possibly hazardous procedures requiring complete mental alertness or physical coordination. Caution patients about possible combined effects with alcohol. Caution should be exercised in administering Librium (chlordiazepoxide HCl) to addiction-prone individuals. Careful consideration should be given to the pharmacology of any agents to be employed concomitantly—particularly the MAO inhibitors and phenothiazines. Observe usual precautions in impaired renal or hepatic function. Periodic blood counts and liver function tests may be advisable in protracted treatment. Caution should be exercised in prescribing any therapeutic agent to pregnant patients.

NAL of the

LOUISIANA STATE MEDICAL SOCIETY

LOUISIANA

STATE MEDICAL SOCIETY

Formerly NEW ORLEANS MEDICAL and SURGICAL JOURNAL

OFFICIAL ORGAN OF THE LOUISIANA STATE MEDICAL SOCIETY

EPTEMBER, 1963

Copyright 1963 by
ana State Medical Society.
per annum, 35¢ per copy

Vol. 115, No. 9

Published monthly by
The Journal of the Louisiana State
Medical Society, Inc.
1430 Tulane Ave., New Orleans 12

Contents

Cardiovascular Studies at the U. S. Naval School of Aviation Medicine Which Have Direct Application to Private Practice 289
Captain Newton W. Allebach, MC, USN, Pensacola Florida

Epidemic Asthma in New Orleans: A Summary of Knowledge to Date 300
Robert Lewis, Ph.D., New Orleans

Homosexuality as an Adaptation in Handling Aggression 304
James H. Brown, M. D., F.A.P.A., New Orleans

Family Oriented Psychotherapy, A Review 312
George J. Caruso, M. D., Baton Rouge



What the General Practitioner Should Know About Glaucoma 317
Robert F. Azar, M. D., New Orleans

Editorial 322

Organization Section 324

Medical News Section 326

Book Reviews 328

Index to Advertisers 38

THE N Y ACADEMY OF MEDICINE
SEP 26 1963
LIBRARY

The Lente Insulins

- wide range of Insulin activity
- free of modifying protein

Additional information available upon request.
Eli Lilly and Company, Indianapolis 6, Indiana.

Lilly

300026

Second Class Mail Privileges Authorized at New Orleans, Louisiana

SALMONELLOSIS

Seven hundred isolations of **Salmonella derby** in humans were reported from the United States Public Health Service. The reports came from 25 States and the District of Columbia during the period March 1 through July 8, 1963. At least 600 of these originated in 40 hospitals or institutions for the care of the chronically ill in 10 States.

A search for a source common to each of the involved hospitals revealed that raw or under-cooked eggs were consumed by more patients than any other single food item or medication within the 48 hours prior to onset of illness. Patients who developed **S. derby** gastroenteritis were, to a large extent, those on restricted diets which included raw or undercooked eggs. **Salmonella derby** organisms were recovered from cracked eggs from farms in one of the geographic areas which supplied 13 of the involved hospitals. The hazard of consuming cracked eggs, particularly when not adequately cooked, has long been known. It is also known that among non-cracked eggs as much as one to several per cent may be found infected with **Salmonella** organisms.

After reviewing the accumulated data the following recommendations must be re-emphasized:

1. The buying and using of cracked or unclean eggs should be avoided.

2. The traditional practice of feeding raw or under-cooked eggs to infants, the elderly, and individuals suffering from gastrointestinal diseases or malignancies should be stopped.

The sanitation of poultry and eggs has become a major concern of public health, since this is the principle source of spread of salmonellosis, a most extensive type of illness caused by food infection.

Louisiana State Board of Health

JAMES R. STRAIN, M. D., M. P. H.

President



BOTTLED UNDER AUTHORITY OF THE COCA-COLA COMPANY BY
THE LOUISIANA COCA-COLA BOTTLING CO., LTD.



You Know--

that we know!

TRUSTED MANY MILLIONS OF TIMES

GOOD DRUG STORES ONLY THE BEST
Katz & Besthoff, Inc.

Prescription Headquarters Since 1905

It's your professional privilege to replenish your ranks...

Give to medical education through AMA-ERF

AMA-ERF

American Medical Association
Education and Research Foundation
535 N. Dearborn St., Chicago 10, Illinois

MEDICAL BOOKS
Of All Publishers
Any book on Medicine, Surgery, and Nursing

J. A. MAJORS COMPANY
147 South Liberty St.
NEW ORLEANS 12, LA.
——Catalogs cheerfully sent upon request——



NTz Nasal Spray gives prompt, dependable decongestion of the nasal membranes for fast symptomatic relief of hay fever. The first spray shrinks the turbinates, restores nasal ventilation and stops mouth breathing. The second spray, a few minutes later, improves sinus ventilation and drainage. Excessive rhinorrhea is reduced.

NTz Nasal Spray also provides decongestive relief for head colds, perennial rhinitis and sinusitis. Supplied in leakproof, pocket-size, squeeze bottles of 20 ml. and in bottles of 30 ml. with dropper.

NTz® Nasal Spray

NTz is more than a simple vasoconstrictor. It contains Neo-Synephrine® HCl 0.5%—the efficacy of which is unexcelled—to shrink nasal membranes and provide inner space; Thenfadil® HCl 0.1% for topical antiallergic action; and Zephiran® Cl 1:5000 (antibacterial wetting agent) to promote the spread of the decongestant components to less accessible nasal areas.

NTz is well tolerated and does not harm respiratory tissues.

NTz, Neo-Synephrine (brand of phenylephrine), Thenfadil (brand of thenyldiamine) and Zephiran (brand of benzalkonium as chloride, refined), trademarks reg. U. S. Pat. Off. 1795M

Winthrop Laboratories
New York 18, N. Y.



clear the tract with Robitussin®

When summer coughs make the rounds and interfere with work and play schedules, Robitussin "clears the tract" safely. Glyceryl guaiacolate, the expectorant agent, increases respiratory tract fluid (R.T.F.) almost 200%. Increased R.T.F. helps flush mucous plugs and other irritants from the bronchi to make coughs more efficient. In the treatment of coughs in 425 infants and children, Blanchard and Ford found that Robitussin "...passed all criteria for clinical usefulness and is highly recommended."* After more than thirteen years and millions of prescriptions, no serious side effects have been reported from Robitussin. Acceptance by infants and older children has been outstanding.

*Blanchard, K., and Ford, R. A.: Clin. Med., 3:961, 1956.

Robitussin®—each 5 cc. tsp. contains:
Glyceryl guaiacolate.....100 mg.
Alcohol 3.5%

Robitussin® A-C—Robitussin with antihistamine and codeine
Each 5 cc. tsp. contains:
Glyceryl guaiacolate.....100 mg.
Pheniramine maleate 7.5 mg.
Codeine phosphate 10.0 mg.
(exempt narcotic)
Alcohol 3.5%

A. H. Robins Company, Incorporated Richmond 20, Virginia

PHARMACEUTICALS RESEARCH



whatever the shape or form of allergy...

Benadryl®

(Diphenhydramin hydrochloride)

effectively relieves the symptoms of vasomot rhinitis For patients sensitive to animal danders, this ag provides twofold therapeutic action to help abort an alle attack. **Antihistaminic action:** A potent antihistaminic breaks the cycle of allergic response, bringing relief of sne



ı, lacrimation, nasal blockage, and rhinorrhea. **Antispas-ɔdic action:** Because of its inherent atropine-like ɔperties, the drug affords concurrent relief of bronchial ɜsm. ***Indications:*** Allergic diseases such as hay fever, ɛrgic rhinitis, urticaria, angioedema, bronchial asthma, um sickness, atopic dermatitis, contact dermatitis, gastro-ɛstinal allergy, vasomotor rhinitis, pruritus, physical aller-s, reactions to injection of contrast media, reactions to rapeutic preparations, and allergic transfusion reactions; o postoperative nausea and vomiting, nausea of preg-ɳcy, motion sickness, parkinsonism and drug-induced rapyramidal reactions, and quieting emotionally disturbed ldren. Parenteral administration is indicated where, in the gment of the physician, prompt action is necessary and l therapy would be inadequate. ***Precautions:*** Avoid cutaneous or perivascular injection. Single parenteral dos-ɛ greater than 100 mg. should be avoided, particularly in hypertension and cardiac disease. Persons who have become drowsy on this or other antihistamine-containing drugs, or whose tolerance is not known, should not drive vehicles or engage in other activities requiring keen response while using this product. Hypnotics, sedatives, or tranquilizers, if used with this product, should be prescribed with caution because of possible additive effect. Diphenhydramine hydrochloride has an atropine-like action which should be considered when prescribing it. Cream (Ointment) should not be applied to extensively denuded or weeping skin areas. ***Supplied:*** Kapseals® of 50 mg.; Capsules of 25 mg.; Emplets® (enteric-coated tablets) of 50 mg.; in aqueous solutions: 1-cc. Ampoules, 50 mg. per cc.; 10- and 30-cc. Steri-Vials,® 10 mg. per cc. with 1:10,000 benzethonium chloride as a germicidal agent; Elixir, 10 mg. per 4 cc. with 14 per cent alcohol; 2 per cent Ointment (water-miscible base).

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit 32, Michigan

14563

Lifts depression..



"I feel like my old self again!" Thanks to your balanced therapy with 'Deprol', her depression has lifted and her mood has brightened – while her anxiety and tension have been calmed. She sleeps better, eats better, and normal drive and interest have replaced her emotional fatigue.

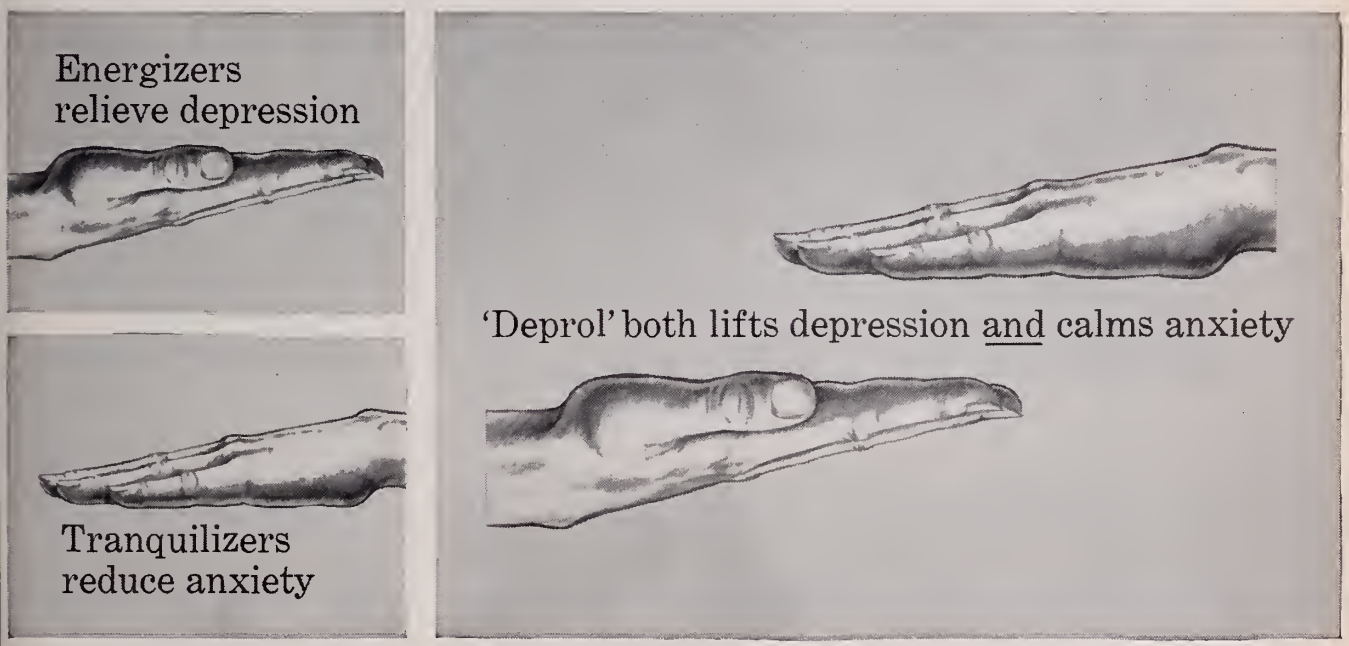
as it calms anxiety

Brightens mood...relaxes tension

Energizers may stimulate the depressed patient, but they often aggravate anxiety and insomnia. Tranquilizers may help the anxious patient, but they often deepen depression and emotional fatigue.

'Deprol' avoids these "seesaw" effects; it relieves both depression and anxiety. Moreover, it does not cause liver damage, psychotic reactions or changes in sexual function.

Slight drowsiness and, rarely, allergic reactions, due to meprobamate, and occasional dizziness or feeling of depersonalization in higher dosage, due to benactyzine, may occur. Meprobamate may increase effects of excessive alcohol. Use with care in patients with suicidal tendencies. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Withdraw gradually after prolonged use at high dosage.



Usual Dosage: 1 tablet q.i.d. May be increased gradually, as needed, to 3 tablets q.i.d.; with establishment of relief, may be reduced gradually to maintenance levels.

▲Deprol▲®

meprobamate 400 mg.
+ benactyzine 1 mg.

WALLACE LABORATORIES / *Cranbury, N.J.*

CO-9259



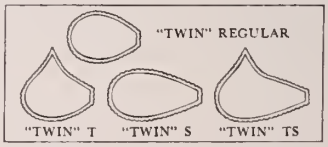
Custom-fitted to prescription instructions

Lov-é brassieres provide correct physiological support because they are custom-fitted to your precise instructions. They give gentle-yet-firm support, more youthful, normal contours and freedom from shoulder strap strain for even the most difficult problem figures. And after breast surgery, the exclusive, patented Lov-é "Twin" creates natural restoration for perfect confidence. Also a complete line of maternity, nursing, sleeping bras and hospital binders. All with the gentle femininity that women appreciate. Have your nurse call for post-mastectomy exercise charts and literature.

Lov-é

CUSTOM-FITTED BRASSIERES

7494 Santa Monica Boulevard
Hollywood 46, California



The Lov-é "Twin" is non-liquid and features adjustable weight for perfect balance, sculptured aerated latex, lace-edged removable cover; 4 basic shapes, 28 size variations and unconditional guarantee. Ideal for all activities, even swimming.

Trained Lov-é fitters in this fine store:

ETHEL CRAIG CORSET SHOP, 1530 Delachaise Street, New Orleans, Telephone: TWinbrook 9-5571



For comprehensive control of the whole pain complex...

Like a triad, the action of Trancogesic is direct and simple as 1,2,3. Its tranquilaxant component – chlormezanone – 1. reduces emotional reaction to pain . . . 2. decreases skeletal muscle spasm . . . and 3. its aspirin component dims the patient's perception of pain. Thus, Trancogesic controls the *whole* pain complex – *with unsurpassed tolerance.*

Each tablet of Trancogesic contains 100 mg. of chlormezanone and 300 mg. (5 grains) of aspirin. The usual adult dosage is 2 tablets of Trancogesic three or four times daily. Reactions to Trancogesic have been minor – gastric distress, and an occasional weakness, sedation or dizziness. Ordinarily, these may be reversed by a reduction in dosage or temporary withdrawal of the drug. Trancogesic is contrainindicated in persons known or suspected to have an idiosyncrasy to aspirin.

WINTHROP LABORATORIES, NEW YORK 18, N. Y.

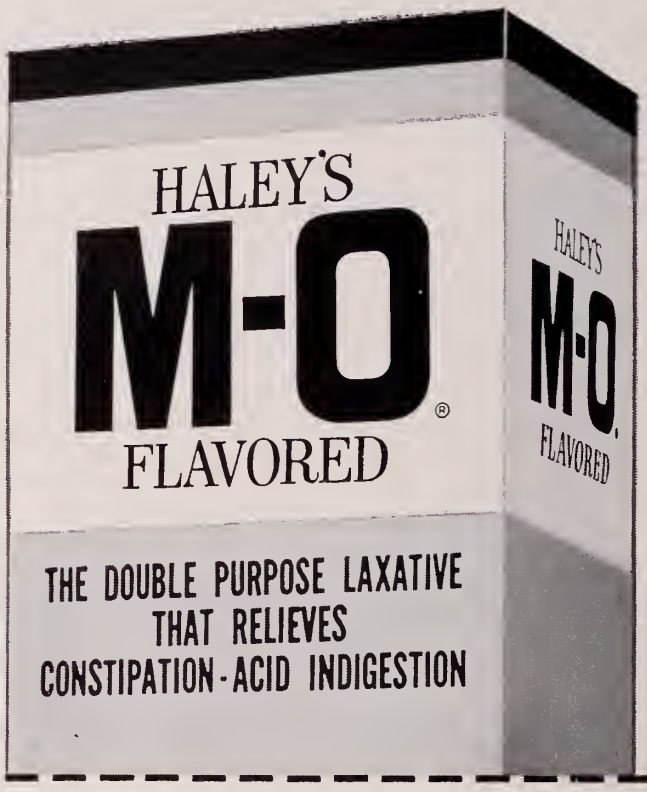
TRANCOGESIC*
CHLORMEZANONE 100 MG. with ASPIRIN 300 MG.

*TRADEMARK

Winthrop

1777M

NOW ALSO IN FLAVORED FORM!



BOTTLES OF
4 OZ., 8 OZ.,
1 PT., 1 QT.

Antacid–Laxative–Lubricant to help correct constipation

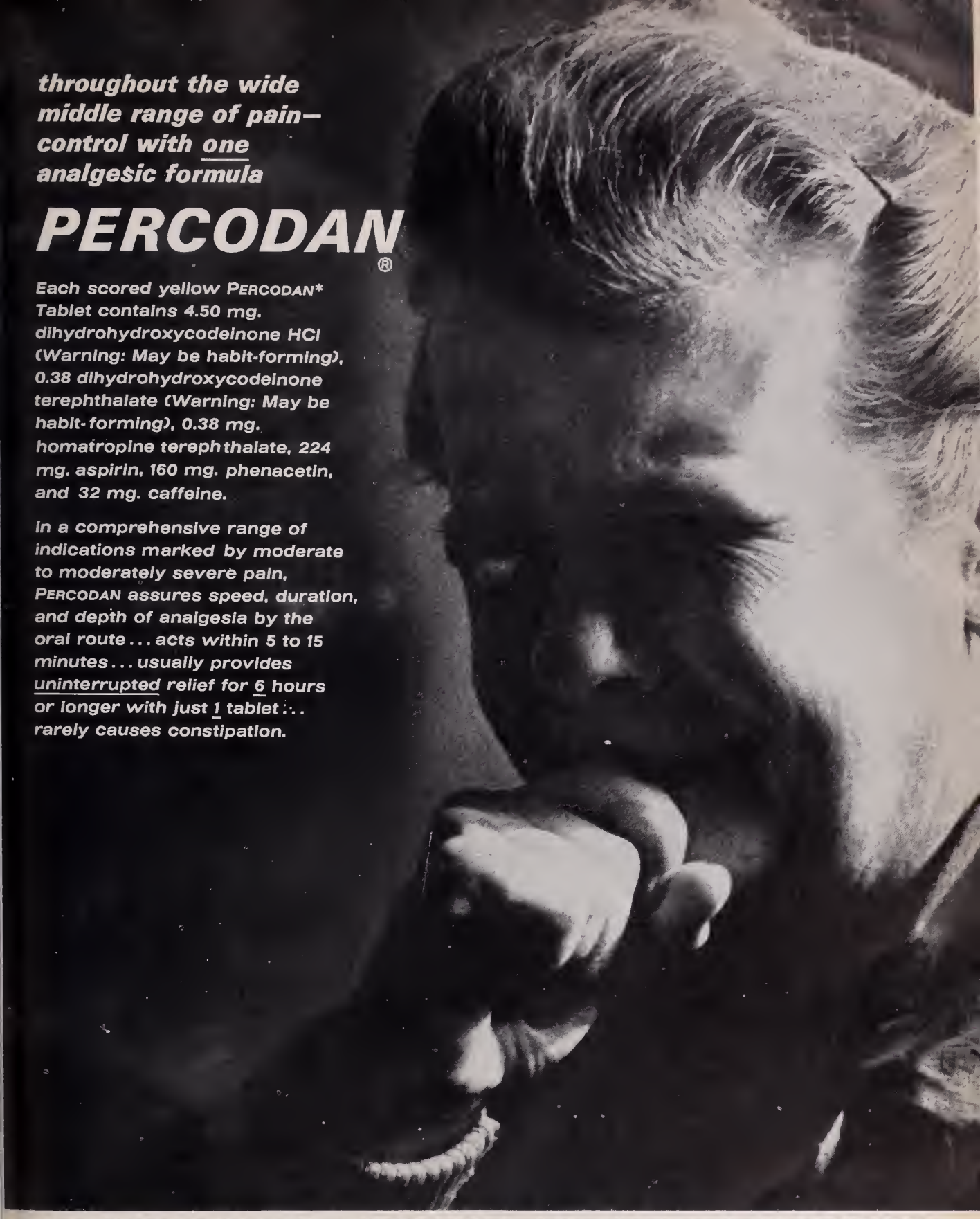
Magnesium Hydroxide plus pure mineral oil make *Haley's M-O* a smooth working antacid-laxative-lubricant that efficaciously relieves constipation and attendant gastric hyperacidity.

The oil globules in *Haley's M-O* are minutely subdivided to assure uniform distribution and thorough mixture with intestinal contents. Oil leakage is thus avoided and a comfortable evacuation is effected through the stimulation of normal intestinal rhythm and blunted defecation reflex.

May we send samples for your evaluation? Just write:

THE CHAS. H. PHILLIPS CO.

Division of Sterling Drug Inc., 1450 Broadway, New York 18, N. Y.



throughout the wide middle range of pain— control with one analgesic formula

PERCODAN®

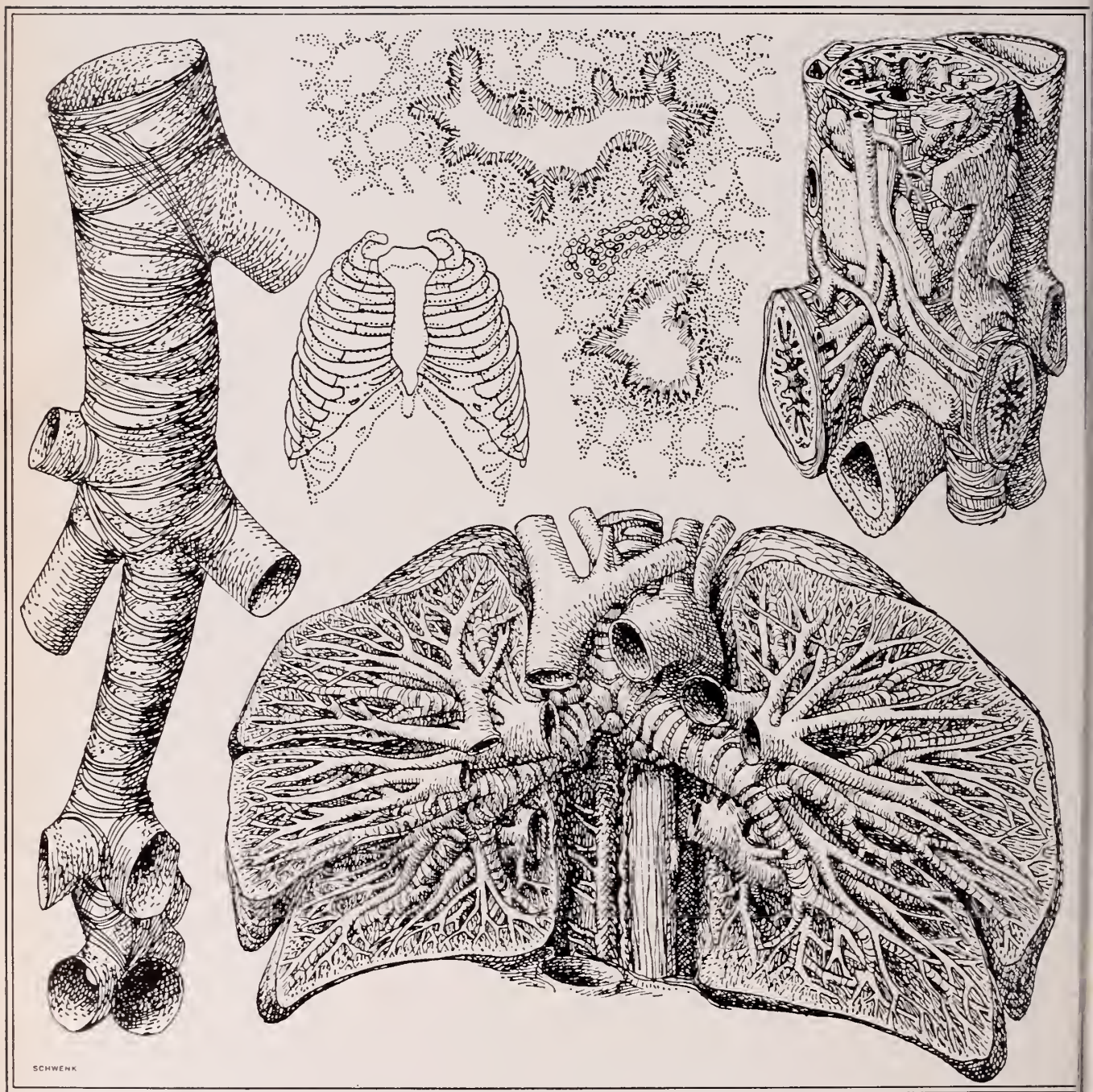
Each scored yellow PERCODAN* *Tablet contains 4.50 mg. dihydrohydroxycodeinone HCl (Warning: May be habit-forming), 0.38 dihydrohydroxycodeinone terephthalate (Warning: May be habit-forming), 0.38 mg. homatropine terephthalate, 224 mg. aspirin, 160 mg. phenacetin, and 32 mg. caffeine.*

In a comprehensive range of indications marked by moderate to moderately severe pain, PERCODAN *assures speed, duration, and depth of analgesia by the oral route... acts within 5 to 15 minutes... usually provides uninterrupted relief for 6 hours or longer with just 1 tablet... rarely causes constipation.*

Average Adult Dose—1 tablet every 6 hours. **Side Effects and Contraindications**—Although generally well tolerated, PERCODAN may cause nausea, emesis, or constipation in some patients. PERCODAN should be used with caution in patients with known idiosyncrasies to aspirin or phenacetin, and in those with blood dyscrasias. **Also available:** PERCODAN®-DEMI, containing the complete PERCODAN formula but with only half the amount of salts of dihydrohydroxycodeinone and homatropine. Both products are on oral Rx in all states where laws permit. Narcotic order required. **Literature on request.** ENDO LABORATORIES Richmond Hill 18, New York

Endo®

*U. S. Pats. 2,628,185 and 2,907,768


SCHWENK

Air Rights

With ARISTOCORT Triamcinolone, many asthmatic patients obtain early gratifying relief of wheezing, dyspnea and spasmodic coughing. And maintenance dosage in many cases can be surprisingly low—*often as little as a single 2 mg. tablet per day.* Yet it provides this symptomatic control—which may enable many patients to continue their customary livelihoods or regular household activities—with only minimal interference with other metabolic functions. In this respect, ARISTOCORT Triamcinolone is distinguished compared with other corticosteroids, old and new. Typical steroid problems of sodium retention and edema, euphoria, or voracious appetite and excessive weight gain rarely occur.

ARISTOCORT Triamcinolone is indicated when anti-inflammatory, anti-allergic action of glucocorticoids is desired. SIDE EFFECTS of glucocorticoids generally: Cushingoid effects, hirsutism, leucopenia, purpura, vertigo, fatigue, increased hyperglycemia, osteoporosis, gastrointestinal hemorrhage, cataracts, growth suppression in children and increased intracranial pressure. Other glucocorticoid effects thought more likely to occur with triamcinolone: reversible weakness of muscles and flushing of face.

PRECAUTIONS: ARISTOCORT Triamcinolone should be used with extreme caution in viral infection, particularly herpes simplex and chicken pox, in tubercular or fungal infection, in active peptic ulcer, acute glomerular nephritis or myasthenia gravis.

FORMULA—Tablets (scored) containing 1 mg., 2 mg. or 4 mg. of triamcinolone. Syrup—2 mg. of triamcinolone diacetate per 5 cc. (5 mg. of triamcinolone diacetate is equivalent to 4 mg. of triamcinolone).

Aristocort®
Triamcinolone

Maximum steroid benefits with minimum steroid penalty

Lederle LEDERLE LABORATORIES • A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York
162-R3 (DC31-S)



Get your low-back patient back to work in days instead of weeks

You can expect rapid results from 'Soma' (carisoprodol)—because this unique drug breaks up both the spasm and pain of low-back syndrome at the same time.

Your patients will usually begin to feel better within a few hours. And as Kestler demonstrated in a controlled study of 212 consecutive patients with low-back problems: the average time for full recovery was only 11.5 days with 'Soma' (carisoprodol), 41 days without it. (J.A.M.A., April, 1960.)

Carisoprodol seldom produces side effects. Occasional drowsiness may occur, usually at higher than recommended dosage. Individual reactions may occur rarely.

USUAL DOSAGE: ONE 350 MG. TABLET Q.I.D.

The muscle relaxant with an independent pain-relieving action

Soma®
carisoprodol

Wallace Laboratories
Cranbury, New Jersey

blood, milk and Maalox®

(magnesium-aluminum hydroxide gel)

Practically standard treatment, now, for perforated ulcer. Why is Maalox included? Antacid therapy *must* continue long after the wound has healed, and patients started on Maalox tend to stay on Maalox. It tastes good; it's effective and will not cause constipation—three important reasons for Maalox over the long haul. Some physicians, we are told, order Maalox routinely for hospital patients on drugs which could irritate. They feel it reduces the likelihood of gastric discomfort. Supplied: Suspension; Tablets No. 1; Tablets No. 2. (Each Maalox No. 1 Tablet is equivalent to 1 teaspoonful and each Maalox No. 2 Tablet is equivalent to 2 teaspoonfuls of Suspension.)



RORER

WILLIAM H. RORER, INC., FORT WASHINGTON, PA.



This is the key that opens the box that contains the labels. Only authorized supervisory personnel have the key to transfer labels from the "lockup box" to the labeling machine. ■ These responsible Lilly employees regard labels as serious business. To make certain that the right label appears on each container, all labels are kept under lock and key until needed on the finishing line. Only the quantity needed to finish the lot is dispensed. When transferred to the finishing belt, the appropriate number of labels is placed in the labeling machine. Excess labels are put in the lockup box until needed. At night, the supervisor returns unused labels to the box lest some get lost or misplaced. ■ This is just one more precaution in an endless list of rules that contribute immeasurably to the quality of the finished product.

Eli Lilly and Company • Indianapolis 6, Indiana, U.S.A.

Lilly

300192

The Journal

of the

Louisiana State Medical Society

$4.00 Per Annum, 35c Per Copy
Vol. 115, No. 9

SEPTEMBER, 1963

Published Monthly
1430 Tulane Avenue, New Orleans 12, La.

Cardiovascular Studies At the U. S. Naval School of Aviation Medicine Which Have Direct Application to Private Practice

• The author discusses the diagnosis of asymptomatic coronary artery heart disease developing in naval aviation cadets. He gives follow up observations on some of these over a 21 year period. The blood pressure, electrical plane of the heart, the vectorelectrocardiogram and the work electrocardiogram were considered in relation to the problem. The presentation shows clearly the advantages of the exercise test.

CAPTAIN NEWTON W. ALLEBACH, MC, USN
Pensacola, Florida

Introduction

THE technological advances in the design of modern man - plane - weapon systems have in no way altered the fact that at times the human element is still a limiting factor in the success of a mission. In some instances this limitation is referable to the cardiovascular system, and in this area coronary heart disease poses the most important single problem. Of particular concern to the flight surgeon is the acute coronary incident which characteristically strikes without warning or premonitory symptoms. The occurrence of such an incident in flight is a hazard[1] not only to the pilot, but to those on the ground as well. The importance of predicting these incidents in both military and commercial pilots is self-evident, yet, at present, we can speak only of the likelihood of this occurrence. We at the U. S. Naval School of Aviation Medicine are very much aware of this problem and over the years have expended a great deal of time and effort in an attempt to find some of the answers. In the following discussion, I wish to describe some of the work which we have undertaken to improve the accuracy of diagnosis in coronary artery disease.

One of the most promising approaches to the problem is a longitudinal study which would follow naval aviators with periodic examination from the time they first come into flight training until their sixth or seventh decade. This type of study permits retrospective examination of records on men in whom coronary artery disease develops to ascertain what factors, if any, might have been of predictive value. In addition, it permits an assess-

* From the U. S. Naval School of Aviation Medicine, U. S. Naval Aviation Medical Center, Pensacola, Florida.

Opinions and conclusions contained in this paper are those of the author and do not necessarily reflect the views or endorsement of the Navy Department.

ment of the relationship of flying to the disease itself.

Just such a study was undertaken at the U. S. Naval School of Aviation Medicine in July 1940.[2] In addition to a careful history and a physical examination, electrocardiograms, electroencephalograms, and somatotyping, as described by Sheldon,[3] were collected on 1,056 healthy, young, naval aviation cadets and instructors. More than 96 per cent of the survivors were re-examined in 1951-52[4] and in 1958-59.[5] The 1963 follow-up is currently in progress. From their records several interesting and important facts have emerged.

At the end of the eighteen-year period, the study group consisted of 432 men who continued as naval aviators and 372 who failed to become naval aviators or who flew for less than five years (nonflying group). The group who remained on flight status experienced less weight gain and fewer were found to have hypertension as manifested by a blood pressure in excess of 140/90 mm. Hg. Also in the flying group fewer had electrocardiograms which could be classified as abnormal or borderline. There were no significant differences between the two groups in the serum cholesterol or the atherogenic index, calculated by the Gofman method[6] from serum lipoprotein determinations. On the basis of these data and those which had been obtained at the twelve-year examination, there is nothing to indicate that flying per se either initiates or predisposes aviators to coronary atherosclerosis. If anything, there is at least a suggestion that flyers are less likely to have coronary disease develop.

In the period from 1952 to 1958, there were six deaths in the entire group which were due to myocardial infarction, but only one in the period from 1940 to 1952. In addition, there were twelve who survived a myocardial infarction or in whom angina pectoris developed. As might be expected, in these men with overt coronary heart disease, the mean cholesterol was higher, the mean blood pressure higher, and the weight gain greater. Statistically, however, none of these measurements either individually or in combination could be shown to differ significantly from those of the other members of the group. It is very disappointing to note that there were no premonitory changes in any of their electrocardiograms which might have suggested the presence of underlying coronary artery disease. Dissatisfying though it may be, this is an extremely important observation. It makes it painfully clear that the resting electrocardiogram is probably of limited value in the diagnosis of occult coronary artery disease. At the same time, these findings tend to substantiate the concept that hypertension accelerates the progression of coronary atherosclerosis.

Blood Pressure Findings

For this reason the data were examined to determine whether there were any clues as to whether hypertension will develop in a given person in later life. The initial blood pressure determinations in 1940 consisted of a "casual" blood pressure recorded in the supine position and a "basal" blood pressure: the lowest that could be recorded after rest. Both the 1952 and the 1958 examinations demonstrated that individuals with higher than average, though normal, blood pressure at age 20 are likely to remain in this same relative position with respect to the group as they grow older. The important fact is that this relative standing in later life places them in the "hypertensive" segment of the population. Of the two initial blood pressures, the "casual" pressure was much the better as a predictor of future hypertension. Further analysis of the data revealed that a high blood pressure reading in a young person is even more ominous if he has an endomorphic or mesomorphic habitus, a positive family history of hypertension, or a subsequent excessive weight. Identification of such individuals is important for it is they who are most likely to develop hypertension in future years. These findings are in complete accord

with the work of Levy, White, and Stroud.[7]

Electrical Plane of Heart

While the blood pressure findings constitute one of the most reliable predictive factors which has so far emerged from the study, one interesting electrocardiographic finding deserves comment. This concerns the electrical axis of the heart as determined in the frontal plane electrocardiogram. Significant changes were noted in the QRS, but little or no change occurred in either the T-axis or in the QRS-T angle. The mean frontal QRS vector moved leftward and superiorally from +61° in 1940 (mean age 24.6) to +48° in 1952 (mean age 36), and finally to +42° in 1958 (mean age 42), as shown in Figure 1.

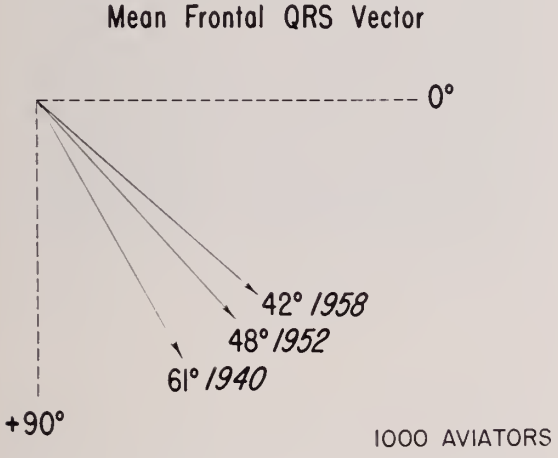


Figure 1.—Shown here on the Standard Reference System are the actual mean QRS headings found in the 1000 aviator study at the indicated times of examination.

While this leftward shift with age has been described before on the basis of age distribution in sample population surveys,[8] this finding in a longitudinal study is far more convincing. The mechanism responsible for the shift is not clear, and indeed there is some reason to believe that more than one factor may be involved.

Examination of Figure 2 shows clearly that the leftward shift of the QRS was not uniform, in that it was marked in some but minimal in others. A change of this type in the frequency distribution suggests that some factor in the aging process affects some persons more than others. One factor commonly credited for causing a leftward deviation of the electric axis is weight gain. In the aviator study, however, it was shown that a modest leftward shift occurred in a significant number of individuals who had neither gained nor lost weight.

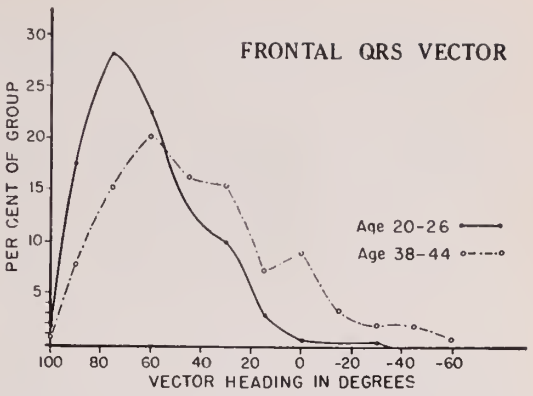


Figure 2.—Frequency distribution curves of the QRS headings in the 1000 aviator study in 1940 and in 1958. The increased symmetry in the 1958 distribution is caused by varying degrees of leftward shift in different individuals.

Grouping the electrocardiograms of individuals according to the degree of shift provides further information which is shown in tabular form in Figure 3. Electrocardiograms showing a shift of 46 degrees or more were found among men who had significantly more weight gain, a higher serum cholesterol, higher lipoproteins in the Sf 20 to 400 range, and a greater increment in both the systolic and diastolic blood pressure. The changes in the other groups are much less striking.

Analysis of the frontal plane T heading revealed surprisingly little change. Actually, the T vector remained almost stationary, moving only 4 degrees to the left from its initial heading of +41 degrees. In consequence, the mean QRS-T angle remained essentially constant as a result of the fact that the movement of the mean QRS vector was from the right of the mean T in 1940 to its left in 1958.

The clinical implications of this leftward migration of the QRS vector with age remains unanswered. It would ap-

Charocteristics of Individuals with Marked Leftward Movement of Frontol QRS Compared to Those With No Significant Change

Change in QRS Vector 1940–1958 (N)	Frontal QRS Vector (1958) degrees	Change in Weight (pounds) (1940–1958)	Cholesterol mg/100 ml (1958)	Lipoprotein fraction* Sf 20 - 400 mg/100(1958)	Change in Systolic BP (1940–1958) mm Hg	Change in Diastolic BP (1940–1958) mm Hg	Change in QRS–T angle (1940–1958) degrees
46° or greater leftward movement (53)	−8.7°#	+27.5#	229#	204.2#	+3.7#	+9.6#	+10.9°#
10° to 46° leftward movement (475)	+40.6°#	+20.1	230	185.1	+2.7	+5.7	−2.8°#
± 10° movement (129)	+60.7°#	+13.3#	216#	159#	+0.9#	+5.4#	0#

*This lipoprotein fractian cantains the major portion of triglyceride transported in the plosmo.

#Indicates statistically significant differences between the means, ($P > .001$).

Figure 3.

pear that when the change is marked, it may be pathological. It is hoped that the findings in the 23-year examination of the group which is now being conducted at the School of Aviation Medicine will clarify this problem. At present it seems reasonable to presume that a marked change in QRS heading of a patient's electrocardiogram should be viewed with suspicion and that such a patient merits a more comprehensive examination for latent coronary artery disease and probably dietary control and weight reduction.[9]

Work Electrocardiogram

One technique which we feel extends our diagnostic capability in coronary artery disease is the work electrocardiogram. This test has been used almost routinely at the School of Aviation Medicine for the last fourteen years. Several years ago our experience with the work electrocardiogram was reviewed.[10]

At that time we pointed out that since there are undoubtedly varying degrees of coronary insufficiency, it was not logical to assume that any single standardized workload would necessarily produce diagnostic electrocardiographic change. For this reason the convention of interpreting an arbitrarily standardized work test on a qualitative basis, that is either positive or negative, limited the range of its diagnostic capability and made false negative responses inevitable. At that time the belief was expressed that, by recording a patient's electrocardiographic response to serial increments of work, the test would provide a quantitative index of the adequacy of coronary blood flow. Subsequent experience has in no way altered this contention.

In performing the test we use a modification[11] of the Harvard step-test. The latter consists of a single step, 20 inches high, behind and above which is a series of horizontal hand holds at a convenient height for any subject (Figure 4). We have standardized the work loads by having the patient climb the step for one to five minutes at either 20 or 30 steps per minute. Only persons in good physical condition can complete the harder degrees of exercise, such as four or five minutes at 30 steps per minute. Information obtained from the patient at the time of taking his history usually suffices to determine the amount of work assigned for the initial test. If, as seldom happens, the first test produces good evidence of coronary insufficiency, the amount of exercise is reduced until such evidence is no



Figure 4.—The modified Harvard step-test as used at the U. S. Naval School of Aviation Medicine.

longer present. When the initial result is inconclusive, the work load is increased until either evidence of myocardial ischemia is produced or a satisfactory level of exercise tolerance is demonstrated.

By using a four channel recorder it is possible to obtain four frontal plane and four precordial leads in less than twenty seconds. Leads I, II, III, AVF, V_2, V_4, V_5, and V_6 are recorded as a baseline before exercise, immediately after, and at 1, 2, 3, and 5 minute intervals. When the tracing does not return to the pretest baseline at the end of five minutes, additional observations are recorded.

During the past three years, we have carried out approximately 1600 exercise tests on 450 patients. There have been no serious complications. The test was stopped on two occasions because of questionable angina. In one patient paroxysmal auricular fibrillation did develop but subsided before treatment could be instituted.

Not all clinics employ the exercise electrocardiogram as extensively as we and only a few exceed the exercise provided by a double Master's test. It should be noted, however, that our patients are much younger and in far better physical condition than the patients seen in most civilian clinics. Almost all of our patients are vigorous, healthy aviators between 22 and 45 years of age who, with rare exception, are completely asymptomatic. Most of these have been referred to us because of a questionable abnormality found in the electrocardiogram taken as part of their annual physical examination. Because of their better than average physical condition, their exercise ability is in no way taxed by either the single or double Master's test. For this reason we have found it mandatory to use the Harvard step test.

Recently two of our colleagues provided us with quantitative measurements of the work loads of the various exercise tests.[12] The values are expressed in terms of the rate of oxygen consumption. Figure 5 clearly shows how the two, three, four and five minute tests compare at both 20 and 30 steps per minute. The dotted lines "net

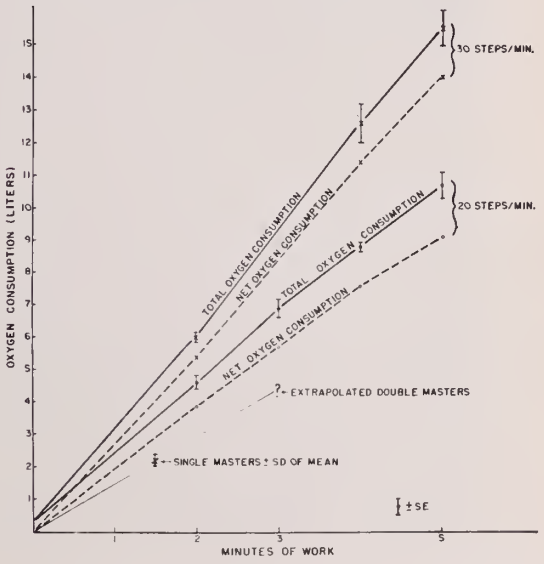


Figure 5.—Oxygen consumption plotted against time for the various work loads employed in the work electrocardiogram. For explanation see text.

oxygen consumption," represent the values obtained when the resting rate of oxygen consumption ("B.M.R.") is subtracted from the total oxygen utilization. For comparison the figure reported by Ford and Hellenstein[13] for the standard single Master's two step test is also shown on the graph. The value for the double Master's test was extrapolated. It is evident that the various grades of exercise on the Harvard step are progressive, and that they all exceed the oxygen requirement of the Master test. The double Master test is essentially comparable with the "easiest" Harvard test. It is of interest that the oxygen demand of the highest work load (five minutes at 30 steps per minute) approaches the upper limits of the cardiovascular system's oxygen transfer capability in a large percentage of the population.

In our clinic the work electrocardiogram has been very helpful in evaluating borderline resting electrocardiograms, especially when the abnormality could be equally well explained by either an unusual normal variant or a residuum of unrecognized disease. In the majority of these cases neither the patient's history nor his medical records is conclusive in excluding old pericarditis, myocardial trauma, or an acute coronary incident. Recently we were confronted with the problem of evaluating a 24-year old Naval aviator who was referred to us because of an abnormal Q wave in lead III and AVF. There was also left axis deviation with a QRS heading of −40 degrees and a T heading of −5 degrees. There were no other electrocardiographic changes of note. History, physical, chest x-ray, cholesterol, atherogenic index were all normal. The fact that his electrocardiographic response to strenuous exercise proved to be physiological (Figure 6) was the decisive factor in our final diagnosis of "no heart dis-

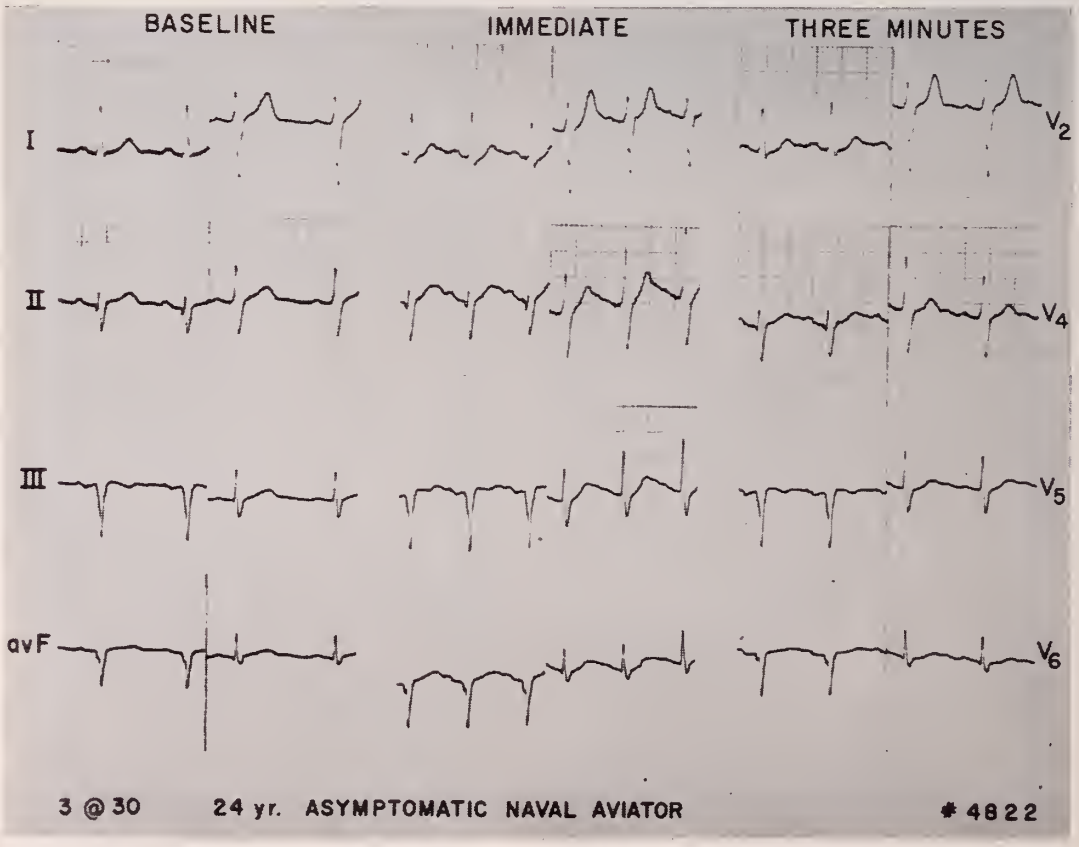


Figure 6.—The work electrocardiogram obtained on a healthy 24-year-old naval aviator after three minutes at 30 steps per minute on the Harvard step test. In the double column at the left is the base line tracing consisting of leads I, II, III, and AVF.

ease," and was the basis for our recommendation that he continue in full flight status.

Abnormalities

An enigma of the work electrocardiogram is the finding that, in approximately half of the patients whose tracings exhibit the Wolff-Parkinson-White abnormality, even minimal work loads produce abnormal ST-T wave changes.[14] This type of response has been observed in several of our patients. That it is probably unrelated to myocardial ischemia is suggested by the response of patients who alternate rapidly between normal and "accelerated conduction."

Illustrative of this fact is the case of a 49-year old male whose only complaint was of periodic attacks of tachycardia. A careful cardiac work-up failed to reveal any abnormalities other that the Wolff-Parkinson-White type of conduction. In Figure 7 are shown his baseline and exercise electrocardiogram in which it is clearly apparent that the pathological ST segment depression after exercise occur only when the ventricles are abnormally depolarized. The normally conducted beats are followed by normal ST segments. In consequence, until a means is found of identifying the false reactors, the exercise electrocardiogram must be considered to be diagnostically invalid in the presence of the Wolff-Parkinson-White conduction abnormality.[15]

A much more common electrocardiographic abnormality which often confronts both the civilian practitioner and the flight surgeon is flattening of the T waves, especially in leads I, V_5, and V_6. In aviation medicine, the problem is com-

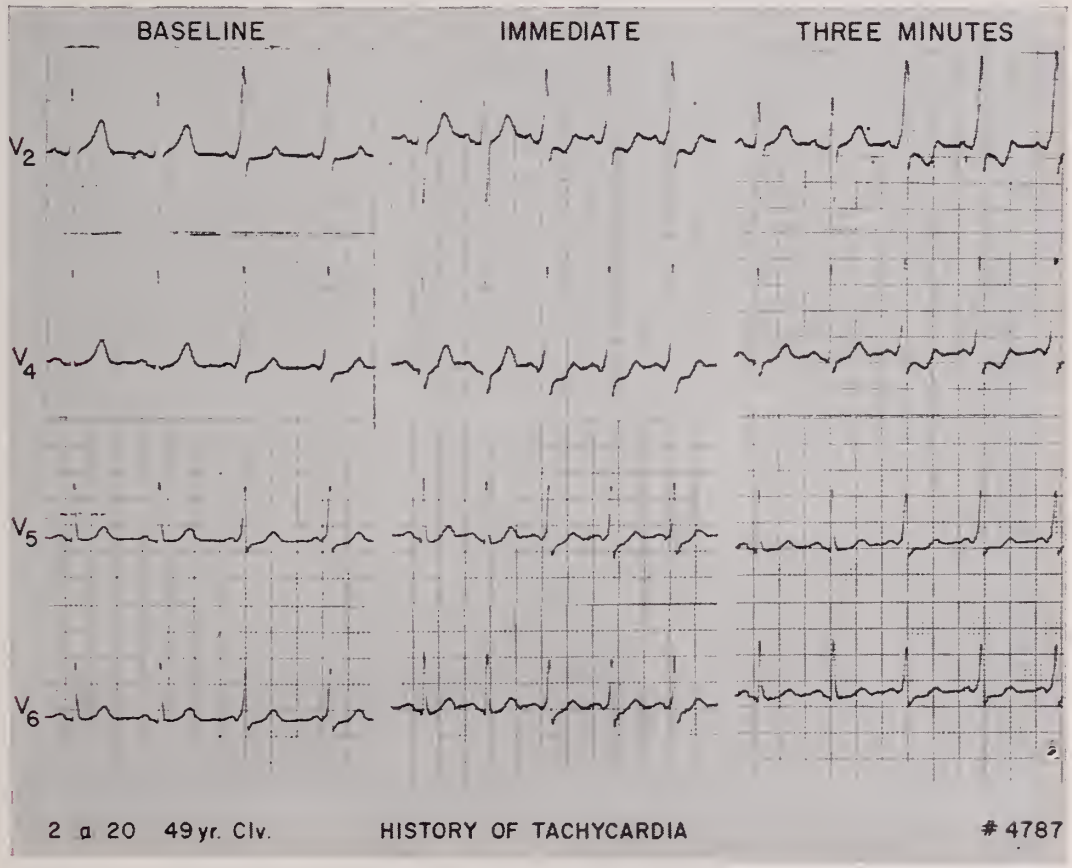


Figure 7.—The work electrocardiogram obtained after two minutes at 20 steps per minute on a 49-year-old male whose only abnormality was a history of paroxysmal tachycardia. The leads shown are V_2, V_4, V_5, and V_6. During Wolff-Parkinson-White type of conduction there is marked ST segment depression.

pounded by virtue of the necessity of the additional decision as to whether the pilot should be grounded or allowed to continue to fly. That the ruling be just is of concern not only to the officer, in that it will determine his future career in military aviation, but also in a sense to the taxpayer as well, since the cost of training as a naval aviator is not inconsequential. Primarily this is a problem of establishing or excluding the presence of coronary heart disease. Here again the work electrocardiogram often proves invaluable as is illustrated by the following case.

In December 1961 a 33-year old naval aviator was referred to our clinic because of an abnormal electrocardiogram taken at the time of his annual physical. His history, physical examination, x-ray, and laboratory studies were negative, with the exception of the atherogenic index which was just above the normal range. It was felt that all the exercise electrocardiograms were positive, with the exception of the tracing taken after two minutes at 20 steps per minute, which was questionable. Since the only definitely positive finding was the work electrocardiogram, it was decided to place him in a Service Group Three status for one year, permitted to fly only with a qualified co-pilot, and to reevaluate him at the end of that period. In December of 1962 he returned for re-examination. There had been no change in his resting electrocardiogram, and he remained completely asymptomatic. His final work test which is shown in Figure 8 consisted of three minutes at 20 steps per minute. It is important that not only were the changes in this test more

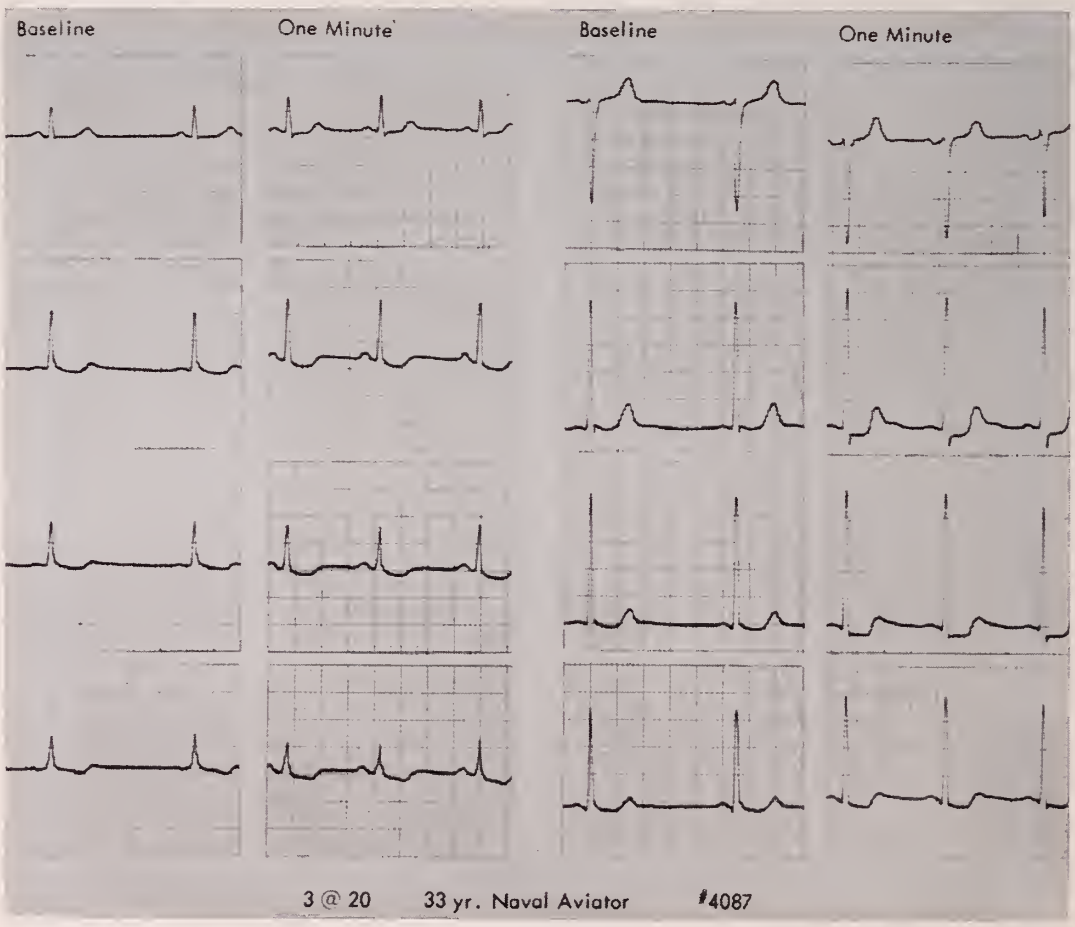


Figure 8.—The work electrocardiogram obtained after two minutes at 20 steps per minute on a 33-year-old normal aviator. The left half of each double column consists of leads I, II, AVF, and III. The right half leads V_2, V_4, V_5, and V_6. The ST segment depressions are normal.

marked than they had been one year previously, but the single Master's test had become strongly positive as well. On the basis of these findings his flight status was permanently terminated.

Reference has been made on several occasions in this paper to the atherogenic index.* We feel it is an important determination and that it provides more comprehensive and more reliable information of the status of the fat metabolism than the cholesterol alone. It is used routinely in all our cardiac evaluations of naval aviators. While not in itself actually diagnostic, it is considered an excellent confirmatory factor and provides prognostic information not otherwise available. We also rely on it in determining which patients should be placed on a low fat diet and employ it as an indicator of the effectiveness of such dietary regimens in these individuals. Unfortunately the determination of the atherogenic index is based on the quantitation of serum lipoproteins which is an extremely complex laboratory process requiring an ultracentrifuge which is available in only a few centers in the country. Because of the time and the cost involved, for some time now we have been searching for a less cumbersome test having the same reliability which could be conducted in our own laboratory.

It has been shown that the beta to alpha lipoprotein ratio is elevated in coronary disease.[16] This is a rapid strip electrophoretic determination which can be accomplished with equipment available in most clinical laboratories. We have recently completed an initial evaluation of this test on 64 patients with and without

* Atherogenic index is the numerical value of the 0-12 lipoproteins in mym% plus 1.75 times the 12-400 fraction (mg%) all divided by 10.

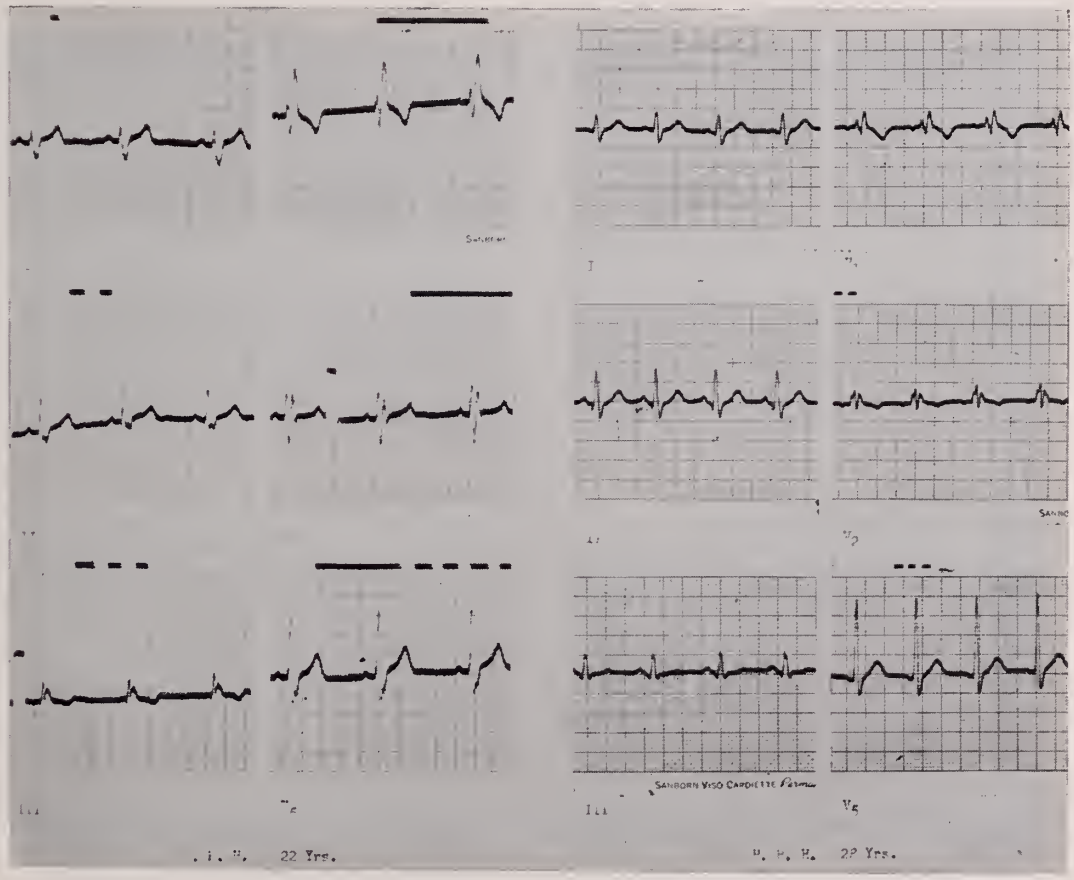


Figure 9.—The six leads in the two left hand columns reveal a right bundle branch block pattern in an otherwise normal 22-year-old male. For comparison in the right is an S_1, S_2, S_3 type of tracing with an unusually prominent R′ in both V_1 and V_2 in a normal 28-year-old male.

known coronary disease.[17] The lipoprotein ratio was found to be in excellent agreement with the atherogenic index (correlation, 0.884). It is believed that this is a valuable test and we expect to use it routinely in our clinic in the future.

One final electrocardiographic problem merits consideration. This is the differentiation of the S_1, S_2, S_3 pattern from that of right bundle branch block (RBBB). Since the latter may occur as a sequela of coronary artery disease, differentiation of the two is important.

The S_1, S_2, S_3 pattern exists in varying degrees of completeness. We are concerned here only with the electrocardiograms in which there is also an R′ in V_1. As a rule, in this instance the QRS duration is normal, but on occasion it may be prolonged up to 0.10 sec. It is generally agreed that this pattern is a physiological variant of the normal electrocardiogram and that the superiorly and rightwardly directed terminal forces responsible for the R′V_1 are derived from the crista supraventricularis.[18]

Although RBBB is also responsible for an R′ in V_1, it is characteristically associated with a prolongation of the QRS complex. In incomplete RBBB the differentiation from the S_1, S_2, S_3 pattern becomes much more difficult. An example of each of these entities is presented in Figure 9. Both of these tracings were obtained from completely normal young men undergoing flight training. It is evident that they differ only in the basis of the magnitude and duration of their terminal forces.

Our interest in this problem was aroused several years ago by the ease with which the two could be separated by the vectorcardiogram. Very briefly, the vectorcardiograph is a device for presenting the electrical forces of the heart on the basis of their direction and magnitude. Since the vectorcardiogram is derived from the

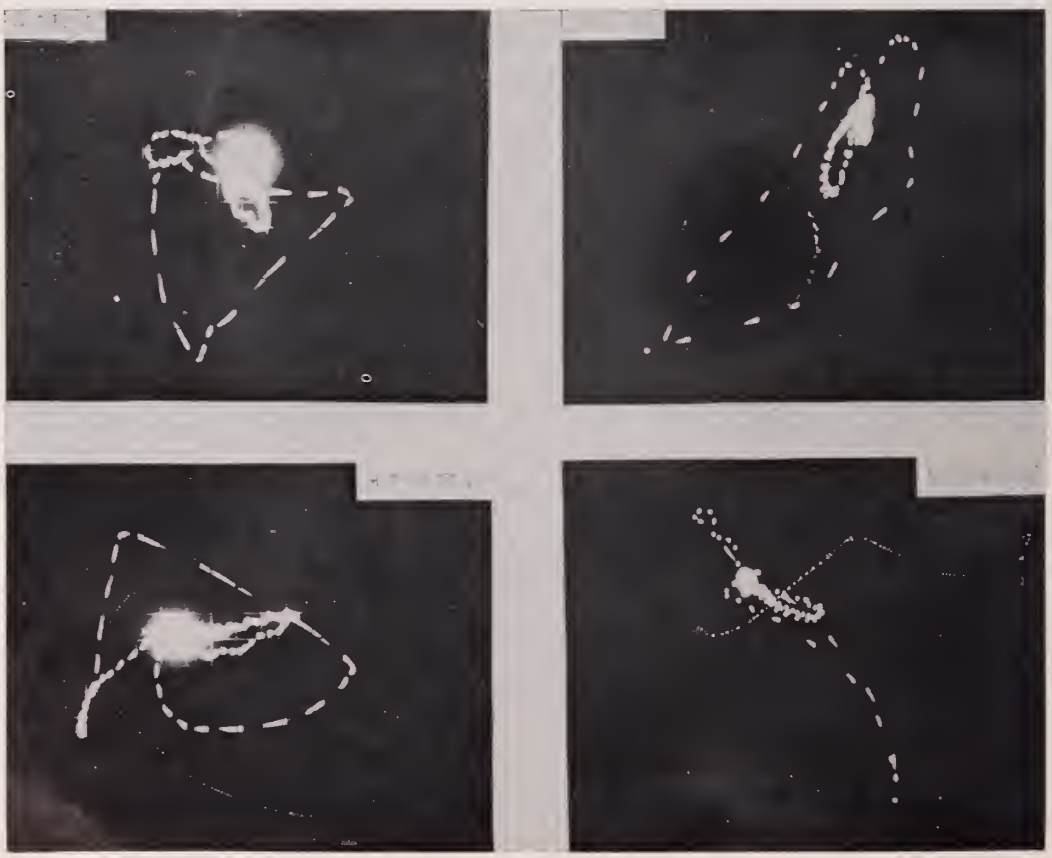


Figure 10. The left sagital and horizontal vectorcardiograph maps of the same two subjects whose electrocardiograms appear in Figure 9. Note the marked difference in the orientation of the terminal forces.

same potentials which produce the electrocardiogram, its greatest value lies in the clarity of its presentation. Figure 10 shows the vectorcardiogram of these same two young men. The difference is readily apparent. In the RBBB tracing the terminal forces are directed anteriorly and to the right. In contrast, in the S_1, S_2, S_3 tracing the terminal forces are primarily superior and right but **not** anterior. From similar studies we have found that these two entities can usually be differentiated on the basis of the ECG alone.[19] In the S_1, S_2, S_3 pattern the R′ in V_1 is usually small with respect to the preceding S wave and usually is absent in V^2. Also in this entity, an R′ almost never appears in the ensiform lead (V_E) although it is the rule in RBBB. In V_5 and V_6 a terminal S wave of 0.03 sec or greater is common in RBBB, but rare in the S_1, S_2, S_3 anomaly.

Summary

This paper has considered several aspects of asymptomatic coronary heart disease which it is believed are of mutual concern to the civilian practitioner as well as to the flight surgeon.

References

1. Glantz, W. M., and Stembridge, V. A.: Coronary artery atherosclosis as a factor in aircraft accident fatalities. J. Aviat. Med., 30:75, 1959.

2. McFarland, R. A., and Franzen, R.: The Pensacola study of naval aviators. Final summary report. Report No. 38. Washington, D. C.: Civil Aeronautics Administration, Division of Research, 1944.

3. Sheldon, W. H., Dupertius, C. W., and McDermott, E.: Atlas of Men. New York: Harper and Bros., 1954.

4. Packard, J. M., Graettinger, J. S., and Graybiel, A.: Analysis of the electrocardiograms obtained from 1000 young healthy aviators. A ten-year follow-up. Circulation, 10:384, 1954.

5. Harlan, W. R. Jr., Graybiel, A., and Osborne, R. K.: A longitudnial study of healthy young men followed over an eighteen-year period. Ann. Int. Med., in press.

6. Gofman, J. W., Glazier, F., Tamplin, A., Strisower, B., and de Lalla, O.: Lipoproteins, coronary artery disease, and atherosclerosis. Physiol. Rev., 34:589, 1954.

7. Levy, R. L., White, P. D., Stroud, W. D., and Hillman, C. C.: Transient hypertension. Its significance in terms of later development of sustained hypertension and cardiovascular disease. J.A.M.A., 126:829, 1944.

8. Simonson, E.: Differentiation Between Normal and Abnormal in Electrocardiography. St. Louis: C. V. Mosby Co., 1961.

9. Graybiel, A.: Diet in the treatment of asymptomatic coronary heart disease in military pilots. J.A.M.A., 172:127, 1960.

10. Graybiel, A., and Allebach, N. W.: The work electrocardiogram. Amer. J. Cardiol., 3:430, 1959.

11. Patterson, J. L., Jr., and Graybiel, A.: The development of a physical fitness test including establishment of standards of fitness for aviation personnel. In preparation.

12. Starke, R. D., and Bartlett, R. G., Jr.: Oxygen consumption in normal subjects performing the modified Harvard Step Test. BuMed Project MR005.13-7004 Subtask 5, Report No. 14 Pensacola, Fla.: U. S. Naval School of Aviation Medicine, 1962.

13. Ford, A. B., and Hellerstein, H. K.: Energy cost of the Master two-step test. J.A.M.A., 164:1868, 1957.

14. Averill, K. H., Fosmoe, R. J., and Lamb, L. E.: Electrocardiographic findings in 67,375 asymptomatic subjects. IV. Wolff-Parkinson-White Syndrome. Amer. J. Cardiol., 6:108, 1960.

15. Smith, R. F.: The Wolff-Parkinson-White Syndrome as an aviation risk. BuMed Project MR005.13-7004 Subtask 5, Pensacola, Fla.: U. S. Naval School of Aviation Medicine, 1963.

16. Kanabrocki, E. L. et al.: Determination of serum lipoproteins by paper electrophoresis after preliminary staining with Sudan Black B. Clin. Chem., 4:382, 1958.

17. Colehour, J. K., and Mitchell, R. E.: The completion of the electrophoretic lipoprotein ratios with the atherogenic index and the serum cholesterol. BuMed Project MR005.13-7004 Subtask 3, Report No. 11, Pensacola, Fla.: U. S. Naval School of Aviation Medicine, 1962.

18. Grant, R. P.: Clinical Electrocardiography. New York: McGraw-Hill Book Company, 1957.

19. Allebach, N. W. Unpublished data.

The Cost of Progress

The drug industry spends more than $100,000,000 annually for research, and no other industry in this country spends that much. It must be emphasized that for every thousand products researched by the drug industry only 40 or 50 reach a marketable stage. Because I am a physician who started practicing medicine before the days of the wonder drugs, I know their real value. As doctors, we have an understanding of the worth of these drugs. We can do so much more with these drugs today than we could with the drugs available to us 15 years ago. All of this means progress. Of course, it also means greater costs.—Edward R. Annis, M. D. in **Pennsylvania Medical Journal**, Oct. 1962.

Epidemic Asthma in New Orleans: A Summary of Knowledge to Date*

• A "poor combustion" product from smoldering garbage dumps was shown to have an important relationship to outbreaks of asthma.

ROBERT LEWIS, Ph. D.
New Orleans

IN 1958, the Division of Air Pollution of Taft Engineering Center, U. S. Public Health Service, was just coming into existence, and was interested in helping to develop research methods which might indicate, for at least one clinical condition, a direct relationship between that condition and air pollution. The directors of that group were well aware from the experiences at Los Angeles, Donora, London (where excess mortality had been shown to be associated with conditions of extreme smog) and other places, that human illness can be severely affected by air pollution conditions. The New Orleans Asthma Project has been supported by a series of Public Health Service Contracts.†

Only under very special circumstances is there mention in the literature of specific diseases related to air pollution, and these are primarily related to industrial situations. An example is the literature of asthma related to castor-bean pumice wherein the outbreaks were invariably described by means of testing persons in the area with castor extracts.

Fluctuations in the Number of Attacks of Asthma

For many years the staff of the New Orleans Charity Hospital had noted severe fluctuations in the number of people coming for emergency treatment of acute respiratory embarrassment, generally recognized but seldom diagnosed as asthma. The events came to the attention of the Division of Air Pollution, and Tulane was asked to undertake an investigation. The New Orleans Asthma Project was originally conceived to be a trial of method to discover an unknown source of an unknown but effective substance. There appeared a series of research questions, the formulation of each to be dependent upon the result of attempts to answer its predecessor.

The first question was to determine whether there are in fact outbreaks of acute asthma (that is, whether the episodes are etiologically related) as versus the possibility that the rare days of high incidence might simply be the result of extremes of chance variation in the numbers of daily attacks, due to etiologically unrelated causative agents. Given a "yes" answer, the next question was to develop whether this etiology might relate to special activities—that is to confirm that the unusual incidence might not be related to some church function, a restaurant, or some social function. Such did not seem to be the case, and the next following question was to determine whether the outbreaks might be related to weather conditions, and if so, whether the episodes might be related strictly to changes or extremes in meteorologic conditions, or alternatively, whether they might be related to some substance borne on the air.

The first year of work was devoted to answering these questions. Indeed there was evidence of true outbreaks of common etiologic origin from analysis of the admissions in Charity Hospital Emergency Center. There was found to be no evi-

* Presented at the Eighty-third Annual Meeting of the Louisiana State Medical Society, May 7, 1963, New Orleans, Louisiana.

dence of common exposure to people, places, or things. There was evidence that the outbreaks were related to the speed and direction of the wind.

Attacks of Asthma Related to Direction of Wind

Further, relating specific cases to the meteorologic conditions prevailing at the time of admission to the center, there was discoverd a gradient of attack rate among the known susceptibles, such that on autumnal northeast winds there appeared a higher attack rate in the northeast part of the city, and a general decrease in that rate by region of the city as attention was moved toward the southwest. The implication was that there might be a point-source of some effective substance in the northeast region of the city (near the Industrial Canal). Upon analysis of summer outbreaks high attack rates were seen among known susceptibles in the southwest section of the city associated with southwest winds, together with a lowering gradient of attack rate as attention was moved toward the northeast sectors. In all cases the rates appeared higher in conditions of low wind speed.

Another portion of the city, north of the river and east of the Industrial Canal, appeared not intimately involved in the outbreak conditions, but rather maintained a relatively high rate more or less continuously. This condition is suggestive of a source spread out over a wide area, rather than a point source which would be highly dependent upon wind direction.

These results were obtained from study relating Charity Hospital admissions, information from the special census of 1958 supplied by the City Planning Commission, and meteorologic records made available by the National Weather Records Center, showing the results of hourly surface observations at Moisant Airport for each hour of the period under study (December 1, 1957 through November 30, 1958).[1]

Search for a Specific Substance

The results gave rise to further study directed to the identification of the sources, and if possible, to isolate a specific effective substance or substances which might be causative.[2-4]

The expanded study involved establishing a special meteorological station and a set of air sampling devices, as well as to maintain a continuous observation on selected persons thought to be susceptible to the substances.

I think it might be interesting to point out that the selection of air sampling devices was a little like placing a large bet in a gambling game for which the odds of winning are unknown. Gas samplers are specific; for each gas there is required a different kind of sampler. For particulate matter, there are several kinds of devices and their differences relate to the size of particle desired as well as a variety of designs intended to control the volume of air sampled for a given specimen. The meteorologic and air sampling devices were directed by Dr. Murray M. Gilkerson of the School of Engineering and the clinical-medical aspects were supervised by Dr. Morton Ziskind of the Department of Medicine.

The "bet" was placed on particulate samplers, feeling that these would give the greatest range of identification, and because a truly antigenic response might be less likely to be associated with a gas, and might even be associated with a very specific particle size.

The air samplers were set in motion and laboratory personnel took up the task of microscopic examination of the results of the samples; about 50 specific identifiable particles were classified for counting on a day-to-day basis, with varying degrees of concentration. Some of these are typical of the area, such as coffee-bean particles, the dust from the grain elevator, the combustion products of automobile exhausts, and the product of cement factories.

Of all these particles, one was found to have a distinct relationship in time with the number of admissions at Charity Hos-

pital, and subsequently was found to be related to the times of onset, in a group of about 150 people followed by the nurses in their homes.

Index Substance is a Poor Combustion Product

The index substance is a poor combustion product in and around which are associated small crystals of silica. The substance was found in increased amounts at the time of increased reporting of attacks and found not to be abundant when the reported attacks were low in number. The only abundant source discovered was in the Agriculture Street city dump.

Subsequent investigations indicated that the outbreak associated with southwest wind were apparently due to substances emitted from the batture dump near Audubon Park, that the outbreaks associated with northeast wind were due to emissions from the Agriculture Street Dump located not far from Franklin Avenue and Florida Street. The high "endemic" incidence in the region along the river toward St. Bernard Parish appears explained in terms of a number of dumps in that region, which virtually surround the population.

The index particle, the poor combustion product in combination with crystals of silica, has not been considered the causative substance, but simply a countable index among many different kinds of particles, gas and liquid droplets which go to make up smoke plumes from the spontaneous underground burning of old raw garbage and trash. The plumes are seen to emerge from fissures in the ground and the volume of emission seems to be related to seasonal fluctuations of the water table thus creating sharp seasonal aspects of outbreaks.

To provide an independent set of evidence the city fire department was asked for the records of calls to the various dumps over the period of 1953-1961. The number of calls per month was found to be closely related to the number of asthma admissions to the emergency center. Further, the calls to the Audubon dump were apparently related to the outbreaks of 1954 through 1957, while calls to the Gentilly Dump were extremely rare during that period but increased over the period 1960 through 1962, apparently explaining the increasing incidence of acute attacks during that period. The influence of the Agriculture Street dump has been comparatively small as compared to the other two dumps but has been consistent over the entire period, especially related to the dramatic outbreaks of the months of October-November each year.

The Index Particle is Related to the Outbreaks of Asthma

The investigations have shown relationships between the source and the index particle, between the index particle and the persons involved in outbreaks, and (by geographic investigation) have shown relationships between persons and the source. There remains one fundamental investigation—that of direct trial of a suspected effective substance in persons known to be susceptible—a clinical trial of a crude antigen derived by aqueous extract from filter samples of the plumes rising from these sources.

The material was processed in the Taft Engineering Center of the U.S. Public Health Service. It was found to be very toxic in its raw form, producing a high mortality rate among guinea pigs.

The aqueous solutions were tested in humans in New Orleans under the direction of Dr. Morton Ziskind and Dr. Vincent Derbes by Dr. Hans Weill.[5]

Reaction of Human Volunteers Showed Significant Relationship to Smoke Plume Extracts

The study was carried out in two groups of human volunteers. The first group was a selection of Tulane University students separated into two sub-groups. The first of these was composed of students with reported history of asthma or hay fever. The second sub-group was composed of students reporting no such history. The other main group was composed of New

Orleans residents known to have been involved in one or more outbreaks in the past.

There were 17 aqueous extracts from samples of Agriculture Street dump plumes. In the student group with no reported history of asthma, approximately 20 % responded to one or more of the antigens. In the student group with history of asthma, approximately 50% responded. For the group of persons known to have been involved in outbreaks in the past, approximately 80% responded to one or more of the antigens.

When the student group with reported history of asthma was separated into those with no current asthma troubles as versus those reporting current asthma trouble about 25% of those with no current trouble responded to one or more of the antigens, and about 75% of those reporting current trouble responded.

Conclusion

The conclusion of the study is that the crude substance extracted from smoke plumes emerging from underground sources in the Agriculture Street Dump is indeed related to asthma in New Orleans.

References

1. Lewis, R. and Cleve, E. A.: Meterologic Aspects of New Orleans Asthma. Tulane University. Report to Dept. of Health, Education, and Welfare, Division of Air Pollution, 1960 (AP-522.3).

2. Lewis, R., Gilkeson, M. M., and Robison, R. W.: Air Pollution and New Orleans Asthma. Tulane University, 1962, 2 vols.

3. Lewis, R., Gilkeson, M. M., and McCaldin, R. O.: Air Pollution and New Orleans Asthma. A Preliminary Report. Public Health Reports, 77:11, 947, 1962.

4. Newell, G. R., Jr. and Swafford, L. I.: Epidemiology of Asthma in Children with Particular Reference to Wind Speed and Wind Direction. Pediatrics, 31:1, 134, 1963.

5. Weill, H., Ziskind, M. M., Derbes, V., Lewis, R., Horton, R. J. M., and McCaldin, R. O.: Further Observation of New Orleans Asthma. Archives of Environmental Health, (in press).

Substantial Evidence of Drug Effectiveness

To be truly effective, the medical profession needs an expanded and improved arsenal of drugs. We have confidence that the American prescription drug industry, if permitted to operate in an atmosphere of freedom, can supply that need. In our judgment, both the industry and the medical profession—and ultimately the American people—would suffer if Government were to require anything more than substantial evidence that a drug is effective for the use claimed for it. By "substantial" evidence we mean that the clinical testing data submitted to the Food and Drug Administration should be performed by truly competent and qualified clinical investigators and that the medical evidence supporting the claim of effectiveness should be significant.— I. S. Ravdin, M. D., Professor of Surgery, University of Pennsylvania School of Medicine, to House Interstate and Foreign Commerce Committee, August 20, 1962.

Homosexuality As An Adaptation In Handling Aggression*

• The author presents a detailed psychoanalytic approach to homosexuality and gives a case history which is fully illustrative.

JAMES H. BROWN, M. D.,† F. A. P. A.
New Orleans

IT is the purpose of this paper to demonstrate some of the defenses utilized in the symptomatic complex of homosexuality. The author intends to show in this case that the primary goal in homosexuality expresses unconscious needs, basically common to all persons, which are nonsexual in their origin. Due to wide variation in the parental-child relationships, cultural and other environmental influences, these needs are often blocked or otherwise distorted. Yet, the goal is always the same; i.e., to afford some degree of satisfying the underlying need with as little discomfort (anxiety) as possible. A rather sensitive balance is established between the individual striving to satisfy his needs in a manner acceptable to himself and the many environmental pressures exerted on him. It is easy to view homosexual behavior as mainly motivated by a desire for sexual gratification. Closer examination of the personality structure shows a different perspective. If we understand the unconscious needs that are striving for expression through sexual behavior we can more fully appreciate the distorted way in which the need is gratified by the choice of the sexual object. The disturbance of these strivings is developed early in life prior to the establishment of a sexual pattern and becomes an important part of the individual's personality characteristics. Later, when the individual experiences sexual feelings and activity, these character traits or behavior patterns are sexualized. Even an individual having such a disturbance with these strivings, may establish at times a heterosexual object choice. There may be many similarities in behavior patterns whether the person seeks the homosexual or heterosexual adaptation and it may be difficult to understand why one choice is preferred over the other. If we view homosexual behavior as an adaptive measure to handle unconscious conflicts, it places the symptom in the category of a neurosis and amenable to treatment, although, not all cases of homosexuality will respond. Indeed, homosexuality may be part of a schizophrenic process or some other severe emotional disturbance. Therefore, each case should be thoroughly evaluated as an emotional problem before attempting alteration of the defensive structure. It is infrequent for a person to be sufficiently motivated to undergo the necessary alteration of defenses to effect a cure or an attenuation of homosexual drives, i.e., the establishment of satisfactory heterosexual activity. The usual case of homosexuality seeking psychiatric help is experiencing discord in such needs as dependency, aggression, competition, domination, submission, or his orgastic strivings. In such cases an attempt is made to help the person re-establish the balance which best serves his particular needs.

Review of Literature

To clarify current knowledge of the homosexual problem, the author will present a review of the pertinent literature. Freud's[1] contributions were primarily of a constitutional nature and were based on

† Assistant Professor of Psychiatry, Tulane University School of Medicine.

* Presented at the Eighty-third Annual Meeting of the Louisiana State Medical Society, New Orleans, La., May 8, 1963.

his theory of the instincts with little emphasis on sociological influences. Environmental influence was important only if the constitutional endowment was not sufficiently strong. Freud believed that the important factors producing homosexuality in the male were a mother fixation, identification with the mother, the tendency to a narcissistic type of object choice (including over evaluation of the male genital), fear of the father (castration anxiety), and a passive anal attitude toward the love object. He also describes a type arising from the inhibition or restraining of aggression against brothers or the father.

Ferenczi[2] was of the opinion that repression of man's fondness for man has led to the over-evaluation of women. Clara Thompson[3] discards the libido theory and approaches homosexuality as a symptom per se. She thinks an important influence in the development of homosexuality is the child's awareness that his sex was a disappointment to the most important parent; especially, if this causes the child to be treated as if he were of the opposite sex. People who have been greatly intimidated or who have low self-esteem, have difficulties making friends, and being uncomfortable with the opposite sex, cling to their own sex because it is less frightening. Feeling understood by people like themselves, they avoid the unpredictability of the unknown. She concludes that early homosexual experiences do not necessarily lead to homosexuality. However, it is probable that a homosexual experience to a boy who is already burdened, who fears women, and feels unequal to life, may add the decisive last touch of his choice of neurosis. A similar seduction of a boy who is not afraid of life is but an occurrence in the process of investigation of life and he goes on to master new experiences. Homosexual play is known to be very frequent in pre-adolescence and causes no serious disturbance to the majority of children.

Specific Cause Not Apparent

Though the specific cause for homosexuality has not been found, the specific needs which it satisfies can be examined. For some people it may offer the only possible contact with another person, thus helping to cope with the problem of loneliness and isolation. Homosexuality can play a constructive or destructive role in personality, but it may be the best type of human relation of which a person is capable and, as such, is better than isolation. It has not been found to be the underlying cause of neurotic structure, although once established, it may contribute to the neurosis.

Nunberg[4] categorizes several types of male homosexuality in respect to origin. He describes a type in which aggression is not avoided; but, on the contrary, makes up an integral part of the homosexual love. He believes the *aim* of the homosexual represents a compromise between aggressive and libidinal impulses. His case demonstrated that through sexual contact with a "man of strength", the patient could absorb this strength and become as strong as the man he loved.

Kolb and Johnson[5] discuss factors which lead to the eruption of overt homosexuality in contrast to latent homosexuality. Their experiences indicated that parents unwittingly encouraged their children into an expression of the parent's own forbidden impulses, thus giving the parents unconscious and vicarious gratification. Although verbal expression is important, the parent's conscious and unconscious image of the child—the parent's hopes, interest, fears, and frustrations—are felt by the child through parental gestures, intonations, bodily movements, provocative smiles and manoeuvres.

Rado: Sexual Patterns are Reparative, Situational, and Incidental

Rado[6] indicates there is no evidence that human beings inherit an organized neurohumeral mechanism of courtship and mating and concludes that Freud's bisexual theory is unproven. Using underlying motivation to understand modi-

fied sexual patterns, he subdivides these patterns into three groups: reparative, situational, and incidental or variational patterns. Situational patterns are related to a lack of opportunity which forces the healthy individual into seeking a temporary deviate pattern. Variational patterns are described as the healthy individual seeking a variation in his sexual experience, even under ordinary circumstances. Reparative patterns are those related to an inhibition of standard performance due to sexual fears and repressed rage; these patterns arising from processes of repair which are, for the most part, unconscious. Fear and resentment of the opposite sex may be so insurmountable that the individual escapes from the male-female pair into a male pair. Male pairs attempt to generate a spurious male-female pattern that achieves the illusion of having or being himself, a mate of the opposite sex. This varies from the characteristic anal mount pattern, with one playing the domineering and humiliating male and the other a submissive female, to a mutual sucking pattern based on the child-parent dependency pattern.

Ovesey[7] reviews Freud's concepts of male homosexuality and reorganizes it into an adaptional frame of reference, in order to demonstrate the societal forces.

Poe[8] calls attention to the generally accepted pessimism in effecting changes in overt homosexuality. This is especially true if one sees homosexuality as an inborn constitutional trait or as a possible development of a bisexual organism. If, however, one accepts Rado's view that homosexuality, like all sexual behavior, is an adaptation, the problem of therapy can be approached without therapeutic pessimism.

Sound Self-Assertiveness May be Lacking

Karen Horney's[9] views differed from Freud's libido theory and his postulation of a bisexual constitution. She describes a neurotic need for affection which may utilize sexual desire to gain the needed reassurance. Such a neurotic need may involve sexual desires of the same or opposite sex. She links homosexual trends to a lack of a sound self-assertiveness.

Of more immediate interest to this study, Horney relates that unusual cravings for power and prestige generally take the form of a desire to humiliate others. This is especially important in a person whose own self-esteem has been wounded by humiliation and who has thus become vindictive. Such a tendency to humiliate may be hidden behind a tendency to admire. As the two are diametrically opposed, admiration offers the best means of concealing tendencies to humiliate. In neurotic competitiveness, sexual relations may become a means of either subduing and degrading the partner or of being subdued and degraded by him.

Saul and Beck,[10] focus their attention on male homosexuality, and attempt to clarify the relationship of this mode of adjustment to the motivations and mechanisms operative in the current life of the individual. They agree with Ovesey that one of the important needs is infantile dependence which may carry with it the general rejection of the heterosexual role.

Monroe and Enelow[11] discuss the disparity between orgastic and alimentary strivings in male homosexuals as the chief motivating factor for psychiatric treatment. Where there is an incompatibility in the first object choice for these two strivings, a second partner may be sought to gratify the otherwise frustrated need.

With the resulting jealousies and rivalries, long term attachments, either conventional or homosexual, are impossible. The resulting fears of desertion cause anxiety and depression, which appear to be the primary motivating forces in homosexuals who seriously seek psychiatric therapy.

Case Outline

The author's case will demonstrate many of the unconscious strivings making up the defensive structure utilized in homosexuality. The history is presented when pertinent, to demonstrate the emotional forces of trauma which influenced the patient's adaptive manoeuvres leading

into his reparative behavior pattern. The treatment technique was psychoanalytic, using Rado's adaptational orientation as a frame of reference. Psychodynamic shifts occurred and led to an attenuation of his homosexual drive. As this transpired, there were definite alterations of his behavior pattern. These alterations were especially noticeable during the latter part of his treatment, as he changed from a passive, retiring, and frightened male into a rather decisive, aggressive, and firm personality.

Case History

The patient, when he presented himself for treatment, was a 33 year old married man with three children. He was a full-time minister who presented his problem as homosexuality and anxiety attacks. The homosexuality had persisted from the time he was about 7 years of age until the present. His anxiety attacks had become more prominent when he left home at about the age of 20 to enter college. They had always occurred in connection with considerable stress and strong inner feelings of tension. The first anxiety he recalled was around the age of 7 or 8 at which time his mother was leaving home following an argument with his father. He is the oldest of five children, having three sisters and a brother 17 years his junior. His parents' marriage was described as a very unhappy one and he recalls many serious arguments, one of which led to his first anxiety attack. He describes his father as being severely critical and degrading of the patient in almost every way, particularly in respect to his physical stature and sissy mannerisms. He felt he was always compared unfavorably with other boys regarding his physical stature. He describes his father as depriving him in many ways, such as not teaching him how to fish or allowing him to have a bicycle, drive a car, etc. He lashes out bitterly at his father for depriving him in these areas of masculine growth. He describes himself as a very puny and scrawny child. He recalls being forced to eat on many occasions, especially by his mother, whom he said literally spoonfed him up until the age of 9. Regarding his eating, he recalled being frightened on many occasions by his father's more punitive threats being added to his mother's demands that he eat all that was placed in front of him, stating "it was always a source of conflict around the table."

Childhood Experiences

He recalled learning some sexual knowledge around the age of 6 or 7, this apparently coming to him from friends in the neighborhood, and especially a girl of approximately his own age who exposed herself to him. There was some sexual play with other boys around his age. One of his more vivid memories is a car accident at the age of 8. This occurred when he ran into the street in front of his home and he was caught between the bumper and wheel, and was dragged some distance. He was unconscious but recalls going to the hospital. An intern contemplated amputating his leg when, by chance, an orthopedist came by and saved his leg with surgery. After prolonged hospitalization, he described a lengthy period of convalescence. During this period he felt himself to be an object of sympathy and was further hampered from more active play with the constant threat of losing his leg. Around the age of 10 or 11 a considerable amount of sexual play began with a boy 2 years his senior. This sexual relationship continued for many years and in essence consisted of an initial wrestling, with his friend getting the best of him, pinning him down and forcing his penis into his mouth. He described strong feelings of wanting to be possessed, chased, tackled, pinned down and have the penis forced into his mouth with subsequent ejaculation occurring. He described many longings to "have something of him inside me". A rather strong love relationship developed between these two which lasted for several years. During his later adolescent period he was seduced by a colored male and later found to have syphilis. This was quite upsetting to him but he

received medical treatment and an apparent cure.

Turn Toward Normal Sex Interests

Around the age of 16 he became more active in religious group activities, feeling some sense of belonging and participation. When he later tried to enlist into Service he was found to have a positive Wassermann and it was at this time during a rather shocked period that he wandered into the local church to pray. Following this, his interest increased in church activities and he decided to go into the ministry, being particularly attracted toward the church ritual. After graduating from high school he continued his college work with his aim to become a ministerial student. It was during his junior year at college that he met his wife who seemed to be a rather warm and giving person. Though the patient had many doubts about his ability to fulfill the male role, he continued to date her and after some two to three years they were married, his wife being fully aware of his previous homosexual problems. They have had three children to date and for all practical purposes the marriage has been successful, the patient performing sexually and both being orgastic. There have been brief homosexual encounters since marriage but these were isolated instances.

Key Psychodynamics

This patient suffers from anxiety attacks, overt homosexuality and more recently a duodenal ulcer. His anxiety attacks have been traced to a childhood memory in which during a severe argument between his parents his mother left the home and the patient was severely reprimanded and threatened with physical punishment if he did not stop crying and go to sleep. Thus, the anxiety attacks are related both to separation from the mother and reinforced by the threat of physical punishment (castration) by his rageful father. Subsequent anxiety attacks occur when he is away from home and his family on trips, or when he is the recipient of anger or criticism. He traces his homosexuality to early sex play with boys around the age of 7 but his most vivid memories are around puberty when he was wrestled and overcome by an older boy who by squeezing his testicles forced him to suck his penis. It was this pattern which developed into his passive sexual behavior and desires to be possessed; i.e., he liked to be overcome by a stronger male and forced into sucking the larger penis.

Sequence of Emotional Stress

The patient is very soft-spoken and mild-mannered, being unable to assert himself or make decisions very easily. He is quite passive and most of his anger is expressed toward himself with resulting unsureness and depression. His father was unusually punitive with a volatile temper. The patient had many more open conflicts with his father, felt constantly humiliated by him and never able to assert himself with him. When he tried on occasion there was a threat of both physical violence and the patient's having to leave home. The father was very critical of his physical stature, build, etc., and the patient never felt he was able to get any masculine strength from his father. The feelings of inadequacy and inferiority are related to a very critical and debasing father. Though severe body damage fears stem from the threatening father, they are reinforced by the accident at the age of 8 when he broke his leg and lived under the constant threat of its possible amputation. This led into his being shielded and protected by his stronger male peers, the price of this protection being nonassertion. This is seen by the threat of losing his leg if he asserted himself in ordinary activities. The retaliation fears were very severe, set up by the punitive father and reinforced by the accident, the patient developing a placating, ingratiating behavior to ward off the dreaded punishment. This became sexualized with his developing a pain-dependent behavior pattern. This represents placating the rageful father in order to ward off castration as well as to gain for himself the closeness he wanted. Much of his current hetero-

sexual relations are followed by passive homosexual dreams which is an unconscious placation of father when he asserts himself in the male sexual role.

Anxiety and Homosexual Fantasies

The patient usually experienced anxiety and homosexual fantasies during his wife's menstrual periods. During her menses she did not function as well in the mother role which further threatened his dependency needs. Secondly he would not indulge in sexual relations during these times, thereby not receiving the enhancement of his masculine image which sex gave him. Thirdly and most important, the bleeding woman was a reminder that they lack a penis, thus reactivating his own fear of having his own penis amputated. This is documented by his early memory of seeing a girl's genitals which invoked an immediate response that it was nasty and he preferred seeing a penis. Shortly after this experience the castration threat was further reinforced by his accident (body damage) and the constant threat of having his leg amputated. He developed an "alimentary" relationship of dependency on his mother who literally spoonfed him for several years. She encouraged a close dependent relationship and he incorporated her image within himself. He developed a magical mechanism that he will become the person he feeds on, as seen by his taking into himself the powerful male penis and in this respect the sexual relationship would seem an extension of the feeding process. There is great disparity between the sexual and feeding role needs he seeks in his wife. The more conscious disparity exists in his wife as the mother-wife image. This is related to the needs he had at the time he met and married his wife. His masculine pride was suffering greatly since he had left home (mother). His wife offered acceptance, understanding and sympathy despite his confessed homosexuality. Her more dependent and clinging nature bolstered his masculine image sufficiently that he could be sexually stimulated toward her. She would seem quite different from the more compulsively organized mother, which further allowed his sexual expression to her. However, he is constantly irritated and frustrated, feeling he is not being fed adequately by her. Of importance in this regard is the fact that his children use her up or take her away, thus not allowing her to adequately take care of him.

Attachment to Mother

The birth of his youngest sibling and only brother was especially traumatic to him. He had felt a very close attachment to his mother and thought her to be loyal to him in their mutual dislikes and techniques in handling his father. He had felt that an unspoken secretive loyalty existed between them but the younger brother's birth intervened and broke up this alliance. Specifically, the younger brother replaced him at her breast and also made him realize his mother still had a relationship with his father. Though the trauma of these realizations were vivid to him, they would seem to be screen memories for some other trauma that took place at the age of 3 when the next oldest sibling was born.

Motivation for Treatment

Of interest is the precipitating event which motivated this patient to seek treatment. It became obvious later in this analysis that his move to a suburban area was that event. Prior to that time he had served directly under a strong supervisor as the minister to students. He was adequately satisfied in his relationships with the younger boys and enjoyed the supervision of the father figure. When he moved, he was cast into the role of being the father himself, and faced with many responsibilities, decisions, and problems that go with the role. This not only denied his being fed, but threw him in conflict with the punitive father image with whom he could not identify. Of further interest was the motivation for his entering the ministry. One obvious motive is expiation of guilt for his rage, though he consciously felt it as guilt of his homo-

sexual activities. The Church, however, symbolizes the more powerful father who would protect him and take care of him as recompense for his services. He especially enjoyed the communion ritual as incorporating the body of Christ which further demonstrates his primary defense mechanisms.

Summary of Emotional Stresses

In summary, heterosexual activity was blocked by guilty fear of retaliation from the punitive father who inflicted severe punishment in symbolic castration. All aggressive and assertive attitudes were thwarted by the father through inhibiting the rage, rendering great psychological impairment to this patient. Thus he developed the passive submissive attitudes as a defense against the rage. This miscarried repair became sexualized as a power struggle, setting up an orgastic pattern of sexual behavior.

Theoretical Considerations

From the foregoing review of the literature and case presentation, certain conclusions may be considered. Primary among these is the idea that one must have a concept of the nature of the maladaptive process—a requisite for proper treatment and therapeutic optimism of the physician. Reference has been made to the necessity of having clearly defined channels of communication with the patient to the requirement that the therapist know his own unconscious mind. The importance of this being not to intrude his own pessimistic or emotional nonverbal impulses to the patient. If this be true, the therapist can become a more objective "mirror" upon which the patient's unconscious is projected and his confused and conflicted feelings are understood and "reflected" back in a clarified and acceptable fashion. This is best achieved in the medium of a positive doctor-patient relationship, and just as the child's behavior reflects the parental-child relationship, one important motivation for emotional growth is to receive the approval of the therapist-parent. As the therapeutic relationship progresses, the patient receives greater satisfaction from his more independent actions and expressiveness but this is achieved by his feeling completely understood and accepted by the therapist. In the milieu of the therapist-patient relationship he revives and relives many of the emotional struggles, earlier experienced with his parents and other influential persons. This therapeutic process then becomes corrective in nature because the emotions being relived are examined in a more true light; that is, the emotions become reality oriented. This is especially true when the current behavior or feelings are correlated with their earlier origins which brought on the maladaptive repair, and the patient realizes they are no longer appropriate or serve his best interests. It is through this process that the patient frees himself of unrealistic or neurotic behavior to a more satisfying and mature adaptation.

Summary

The purpose of this paper was stated and the writer's framework of orientation was given. The appropriate literature was reviewed beginning with Freud's postulates and tracing the changes in psychiatric thinking to the present. In the writer's opinion, the most important and influential concept is offered by the adaptational framework for the psychodynamics of behavior. A case was presented to demonstrate some of the non-sexual strivings observed in male homosexuality. In the case reported the principal needs were dependency (alimentary) versus his aggressive masculine image. His inability to identify with his punitive father and the ensuing power struggle was demonstrated. This power struggle was incorporated and expressed in his pain-dependent behavior. Though these were the principal conflicts involved, others such as forbidden incestuous fears, sibling rivalry, etc. were brought out as influential. The resolution of these conflicts led to the diminution of his homosexual drives and the establishment of a much more satisfying heterosexual adjustment.

References

1. Freud, S.: "Three Contributions to the Theory of Sex," The Basic Writings of Sigmund Freud, edited by Dr. A. A. Brill, Random House, 1938.

2. Ferenczi: "Sex in Psychoanalysis," The Nosology of Male Homosexuality, Chapter XII, Robert Brunner, 1950.

3. Thompson, Clara: "Changing Concepts of Homosexuality in Psychoaualysis," Psychiatry, 10:183, 1947.

4. Nunberg, H.: "Homosexuality, Magic and Aggression," International Journal of Psychoanalysis, XIX: 1938.

5. Kolb, L. and Johnson, A.: "Etiology and Treatment of Overt Homosexuality," Psychoanalytic Quarterly, 24:506, 1955.

6. Rado, S.: "A Critical Examination of the Concepts of Bisexuality," Psychosomatic Medicine, 2:459, 1940.

Rado, S.: "An Adaptational View of Sexual Behavior" (1949: Revised 1955), Psychoanalysis of Behavior, 186, Grune & Stratton, 1956.

Rado, S.: "Evolutionary Basis of Sexual Adaptation" (1955), p. 312, Psychoanalysis of Behavior, Grune and Stratton, 1956.

7. Ovesey, L.: "The Homosexual Conflict, An Adaptational Analysis." Psychiatry, 17:243, 1954.

8. Poe, J.: "The Successful Treatment of a 40 Year Old Passive Homosexual, Based on an Adaptational View of Sexual Behavior," Psychoanalytic Review, 39: 23, 1952.

9. Horney, K.: "The Role of Sexuality in the Neurotic Need for Affection"; "The Quest for Power and Prestige and Possessions"; "The Neurotic Personality of Our Time," pp. 135-188; Norton Co., New York, 1937.

Horney, K.: "The Dread of Womau," International Journal of Psychoanalysis, 7:348, 1932.

10. Saul, L. J., and Beck, A. T.: "Psychodynamics of Male Homosexuality," International J. Psychoanalysis, 42:43, 1961.

11. Mouroe, R. R., and Enelow, M. L. "The Therapeutic Motivation iu Male Homosexuals," American Journal of Psychotherapy, XIV:474, 1960.

An Industry Supplied the "Muscle"

The age we live in is rooted in technology. Machines are everywhere and have been devised to do just about everything. These machines and apparatus, and the **expertise** necessary to manage them, were available when antimicrobial agents appeared. Experts in the processes of fermentation readily converted their methods and apparatus to the production of penicillin; pill-producing machines could be devised for turning out sulfonomides or isoniazid in large quantities; quarters used for the production of antipneumococcic serum from thousands of rabbits served well for animals used to test the efficiency of antibiotics. Behind these elaborate facilities were the resources of the pharmaceutical corporations. The industrial capitalism that arose in the 18th and 19th centuries in Europe and America supplied the "muscle" in the war on infections, the money needed to run the machines and to hire the workers. We cannot say that no other way would have been possible; we can say that this method was tremendously effective.—Harry F. Dowling, M. D., in **Archives of Internal Medicine,** Nov. 1962.

Family Oriented Psychotherapy, A Review*

• This paper considers the need, the reactions within the family, and the analytic method of treatment for family situations involving emotional illness.

GEORGE J. CARUSO, M. D.
Baton Rouge

THERE is a current movement in psychiatry to involve families in psychotherapy rather than focus solely on the individual. A number of psychotherapeutic techniques have been tried in recent years, all of which might be loosely termed Family Therapy.

The basis for this trend is found in changing attitudes in the profession concerning the nature of emotional illness and emotional health. Early psychoanalytic concepts saw emotional illness as arising out of the childhood experience of the individual, becoming fixed in certain patterns rather early in life, and being relatively immune to influence by later life experiences other than the experience of prolonged psychoanalysis. Current psychoanalytic thought, however, is that emotional disturbance and emotional health represent changing, dynamic patterns of behavior influenced continuously by later life experience, the most important aspect of which is current family life. Ackerman[1] states that "abnormal behavior in adults has significant roots in the experience of childhood integration into a particular family but continues to be molded by current family experience." He believes that better understanding of personality disorders of adults, as well as of children, can be had if one views the individual not in isolation but as part of a family, which must also be studied to learn the reciprocal effects of the interaction between family members.

* Presented at the Eighty-third Annual Meeting of the Louisiana State Medical Society, New Orleans, La., May 8, 1963.

Transference Phenomena

Grotjahn[2] compares the family to analytic therapy, in that he sees both based on transference phenomena. The individual does not merely see the members of his family as they really are, but also sees them as representatives of important figures from his own childhood. He transfers images of his inner childhood family to the outer realistic family of adulthood. There exists then, for the individual, his real childhood family, the unconscious image of that family within himself, and the projection of these images onto the family of the next generation. Conflicts, then, that existed between the individual and some other member of his childhood family are re-enacted with that member in the family of the next generation onto whom the unconscious image has been projected. To exemplify, a young married woman seen in an initial interview complained bitterly about her husband's obesity when asked about her current family life. Other than this, she considered her husband and her marriage perfect. At the following interview, her husband was seen and he was far from being obese. When the patient was next seen, she revealed that her mother was quite fat and was "perfect". Later treatment revealed considerable conflict between the patient and her demanding rigid mother. Thus, through observing a projection of a childhood image in the patient's current life, an old conflict was rather quickly exposed in the therapeutic situation.

In healthy family life these conflicts are worked through without conscious insight and a more realistic appraisal of the family is achieved. In neurotic families the conflict continues endlessly.

Another factor in centering therapeutic interest on the family comes from recent studies in communication demonstrating the importance of nonverbal communication. Such communication in family life, when properly operating, permits smoother, more effective family functioning. However, when communication is disturbed, serious family pathology can be created. Weakland,[3] in describing the "Double-Bind" hypothesis, shows how severely disturbed an individual can become when he receives mutual contradictory messages from a person upon whom he is dependent.

A third consideration leading to attempts to treat entire families has been the recognition of the fact that pathologic behavior in one individual can give gratification to other members of the family. Freud[4] recognized how an individual's symptoms, no matter how painful, provide him with neurotic gratification. However, it remained for therapists working with children to recognize that Freud's observations regarding neurotic gratification at the individual level was equally true on a family level. Child psychotherapists observed how a child's symptomatology gave mutual satisfaction to all family members. Szurek and Johnson,[5] observing the complementary relationship of the pathology between patient and family, concluded that it was impossible to treat a serious behavior problem in a child without treating the parents as well.

Such observations have given rise to the concept of a distinct neurotic process existing in families. This family neurosis, or complementary neurosis as it is also called, is something more than the mere sum of the neuroses of the individual family members. It represents a new pattern of defense established by the family to bind the anxiety of its individual members. For example, the main conflict may be centered in the personality of a particular family member who has been assigned the role of scapegoat. It may also be lived out in the interaction between a particular family pair.

Pattern of Defense Has Relation to Marriage

The neurotic person, constantly defending himself from the anxiety arising from awareness of his inner conflict, will select a mate for marriage who is willing to live within his own narrow limits. The mate he chooses will be one whose own conflicts are such so as to complement his neurosis. Patterns of family life will then be established so as to provide maximum neurotic gratification to each. A number of patterns have been identified in marriage that represent complementary neurosis. Mittlemann[6] lists these as:

1. One partner being dominant and aggressive and the other passive and submissive.
2. An emotionally detached person married to one who craves affection.
3. Marriages where there is continuous rivalry between the partners for aggressive dominance.
4. One of the partners of the marriage being helpless and craving dependency from an omnipotent mate, with mate responding by being endlessly supportive.
5. One of the mates alternating between periods of dependency and self-assertion, while the other alternates between periods of helpfulness and of feeling unsatisfied in his need for affection.

Psychotic Reactions Related to Disturbed Family Life

Recent research into family life has indicated that psychotic reactions, as well as neurotic ones, may be the product of a disturbed family life.[7, 8] Bowen[8] sees schizophrenia as a pyramiding of immaturity through three genreations, culminating with the mother of the schizophrenic child denying her own helplessness and immaturity and projecting these feelings onto her own child. She refuses to accept growth and maturation of the child and attempts to keep the child helplessly dependent upon her throughout his life. Bowen stresses the importance of nonverbal communication between mother

and child in that the mother will often verbalize wishes for the child to act in a more mature manner and to not be dependent upon her, while in her nonverbal communication she insists that the child stay helplessly dependent.

In marriages between psychotic persons, a mutual adaptation usually occurs in which one of the partners adapts himself to the other and takes some of the main psychopathology by identification.[9]

Psychotherapy of an individual who is living in a family where there is strong

Treatment Difficult in Certain Family Situations

complementary neurosis or psychosis is exceedingly difficult at best and often impossible. The gratification of unconscious wishes and demands that the person receives in the family situation may be so intense that it serves as a resistance to therapeutic interpretation. An example of disturbed behavior leading to gratification in family life is rather frequent and strikingly observed in the family lives of persons habituated to the overuse of alcohol. The wife of an alcoholic person provides him considerable reward for his drinking by giving him tender loving care during his recuperative period. She herself is gratified by feeling strong and superior to the helpless ineffectual spouse. In other instances, one or more family members obtaining gratification through the patient's symptoms may nonverbally prohibit the patient to make any change. Dire threats will be directed to the patient to frighten him into remaining in his complementary family role. For example, a grown single son in treatment might be threatened with maternal suicide should he mature and marry instead of maintaining the role of 'baby of the family', so that his infantile mother can remain free of her anxiety. In the attempt to overcome such blocks in psychotherapy, techniques for handling the resistance-provoking family neurosis have been attempted. Grotjahn[2] finds that temporary introduction of a marital partner into a patient's therapy session can often expose the complementary neurosis to direct observation so that an impasse in treatment can be overcome. However, concurrent therapy of the more significant family members involved in a neurotic interaction is generally indicated. Concurrent treatment might be carried out by separate therapists, not in communication with one another, by a single therapist seeing each of the members of the family interrelationship, or by separate therapists who do communicate with one another.[6] If the complementary reactions are not of a serious nature, separate therapists not in communication will suffice and each patient can be shown how his behavior affects the mate or other family member, and how he in turn reacts to the behavior of the other.

Question of Single or Multiple Therapists

Having the same therapist, or co-therapist, in communication is necessary where there is a serious complementary reaction and offers several advantages over separate therapists. First, the therapist can obtain cross-information in the course of the treatment which makes him more perceptive to the problems of each patient. In addition, during periods of severe stress for one of the mates the therapist can, if necessary, modify the behavior on the part of the other which was intensifying the tension of the first.[6]

There is some disagreement among therapists as to whether it is better for a single therapist to alone see family members, or to have co-therapists. While Mittelmann[6] feels that one therapist is generally best except for contra-indications, Johnson and Szurek[5] stated that two therapists were better than one in observing how a particular neurotic interpersonal reaction could give gratification to all family members involved. Kubie[10] states that the same therapist should never treat marital partners, as either patient may lose confidence in the therapist's impartiality.

Concurrent treatment by a single therapist is felt to be inadvisable when either mate, because of shame or embarrass-

ment, is reluctant to see the same therapist; if either mate demands information about the other from the therapist; or if the marriage appears doomed to a failure for which one of the partners would be likely to blame the therapist.[6]

For co-therapists to approach treatment of a family, the most fundamental requirement is the absence or minimal degree of competitiveness between the therapists.

There are additional questions that arise concerning concurrent treatment. One of these concerns the threat to confidentiality of each patient's therapeutic relationship. Experience has shown, however, that when the co-therapists explain that there is to be cross-communication between them there rarely is an objection from patients. As Ackerman[1] observes, there are no real secrets in a family that need to be maintained. Many such supposed secrets are common knowledge that family members keep from open communication by mutual consent. Besides, as Grotjahn[2] states, people spontaneously wish to focus on themselves as an object of interest in treatment and are not so concerned about the inner secrets of a spouse or child. In the rare instance where a patient merely wishes to discuss the other party or parties in treatment, this is seen as a resistance to his own treatment. Usually, anxiety in the person most fearful of change will lead him to demand advice concerning management of the other person, identified by him as "the patient." The therapist should recognize the true nature of this anxiety and try to uncover its correct unconscious source, rather than fall into the role of guidance counselor.

Benefits of Group Therapy

Group therapists have observed similarities between the dynamics of the group process and of family life. As a result, new techniques in treating the complementary neurosis are being developed.[11] In general, group therapy techniques provide an opportunity for old and current family experiences to be renewed in the group situation. Patients readily transfer their family neuroses on to the reality of the group. The therapist and other group members can then confront the individual with directly observed behavior patterns and offer interpretations concerning unconscious motivation. The individual, by being encouraged to show greater spontaneity of expression in the group treatment situation, will practice more spontaneous expression in the group and will eventually demonstrate this increased spontaneity in his family. Group therapy also aids the various family members to become more conscious of their respective roles in family life and can demonstrate to family members the essential unity of the family, through the example of cohesiveness in the group itself.

Group Treatment

Group treatment situations dealing exclusively with family units have been reported.[12, 13] Bell[12] treats entire families as a group, seeing all members simultaneously, on a weekly basis in brief therapy. His emphasis is in treating the family unit, not its individuals. Ritchie[13] describes a technique of 'Multiple Impact Therapy', wherein parents and their delinquent children are seen by a team of therapists intensively over a period usually lasting two days. There are group meetings involving various combinations of therapists and family members. From the reports, it would seem that this technique is extremely useful in arresting an acute disintegrative process in the family and in motivating families to take further steps to correct their difficulties.

Although there are many forms of simultaneous treatment of multiple family members, there are certain features common to most of these. Emphasis is placed upon the interacting unconscious process of all the family members and the therapist focuses his interest on the ways that these unconscious processes mutually affect the behavior of all members of the family. The process is psychotherapy, in that change is brought about by interpretation of the unconscious processes and

not by manipulation, management or guidance. Family therapy does not represent a "new" kind of treatment, but merely an application of tried and tested psychotherapeutic procedures applied to the family rather than to the individual.

Summary

The literature has been reviewed to describe a changing orientation in psychotherapy, wherein greater emphasis is given to the family unit. Rationale for a mode of therapy to treat the family is given. And a variety of technical procedures is briefly described.

References

1. Ackerman, N. W.: The psychodynamics of family life, Diagnosis and Treatment of Family Relationships, Basic Books, Inc., New York, 1958.

2. Grotjahn, M.: Psychoanalysis and the Family Neurosis. Norton, New York, 1960.

3. Weakland, J. H.: The "double-bind" hypothesis of schizophrenia and three party interaction, The Etiology of Schizophrenia, D. D. Jackson, editor, Basic Books, Inc., New York, 1960.

4. Freud, S.: A General Introduction to Psychoanalysis, Perma Giants, New York, 1949.

5. Szurek, S., Johnson, A., Falstein, E.: Collaborative psychiatric therapy of parent-child problems, American Journal of Othopsychiatry 12:511-516.

6. Mittelmann, B.: Analysis of reciprocal neurotic patterns in family relationships, Neurotic Interaction in Marriage, V. W. Eisenstein, editor, Basic Books, Inc., New York, 1956.

7. Lidz, T. and Fleck, S.: Schizophrenia, human integration and the role of the family, The Etiology of Schizophrenia, D. D. Jackson, editor, Basic Books, Inc., New York, 1960.

8. Bowen, M.: A family concept in schizophrenia. The Etiology of Schizophrenia, D. D. Jackson, editor. Basic Books, Inc., New York, 1960.

9. Bychowski, G.: Interaction between psychotic partners, Neurotic Interaction in Marriage, V. W. Eisenstein, editor, Basic Books, Inc., New York, 1956.

10. Kuhie, L. S.: Psychoanalysis and marriage—practical and theoretical issues, Neurotic Interaction in Marriage, V. W. Eisenstein, editor, Basic Books, Inc., New York, 1956.

11. Perelman, J. S.: Group therapy of married couples: a symposium,—problems encountered in group psychotherapy of married couples, International Journal of Group Psychotherapy 10:136-142.

12. Bell, J. E.: Family group therapy, Public Health Monograph 64, U. S. Government Printing Office, 1961.

13. Ritchie, A.: Multiple impact therapy: an experiment, Social Work 5:16-21.

Discussion

Dr. Arthur S. Samuels (New Orleans)—Dr. Caruso is to be congratulated for a masterful job of integrating into a concise body, the quintessence of a highly complicated, rapidly expanding field. He has described well the major factors involved in the origin and process of family neuroses, and has introduced us to some of the treatment procedures currently in use.

Dealing with the illness constellation of an entire family unit, rather than artificially singling out one member of the family as the "sick one", greatly enhances our treatment perspective and enlarges our therapeutic potential. It also vastly increases the emotional demands made upon the therapist. It is here that I would like to add a cautionary note—the therapist must not only be aware of the complex emotions and unconscious forces at work in the family, he must also alert himself constantly to countertransference feelings set off within himself. Becoming close enough to a family to know its pathology well can at times stir up in the therapist echoes of his own childhood or contemporary family life. If the doctor is unaware of these emotional reactions set up within himself, they may influence him in adopting unobjective and untherapeutic attitudes toward the family he is trying to help.

Dr. Caruso makes an important differentiation between family counseling and family psychotherapy. The counselor may be the family physician, minister, or an agency social worker. He helps the family to solve its problems by direct suggestion and advice. This can often be a welcome crutch which can tide a family over in times of emergency. Advice, though at times life saving, does not help a family grow toward self-reliant cohesiveness. The task of the trained family psychotherapist is to note and reveal unconscious thoughts and behavior patterns which have been destructive to healthy family relationships. This promotes a freedom and maturity which help the family members to find new and more wholesome ways of adapting to one another.

What The General Practitioner Should Know About Glaucoma

• The author gives a brief and clear explanation of glaucoma. The paper is meant to help the physician who is not an ophthalmologist to recognize the disease early. He urges routine use of tonometry and ophthalmoscopy.

ROBERT F. AZAR, M. D.
New Orleans

MORE than 800,000 Americans slowly are losing their sight from glaucoma because of ignorance and neglect. One out of every eight blind persons in the United States is a victim of this disease. Despite the fact that nearly all glaucoma, if discovered early, can be controlled so that there is no visual loss, it still is the single greatest cause of blindness in this country.

Glaucoma may be defined as an abnormal elevation of intraocular pressure which is incompatible with continued normal function of the eye. Since vision is irretrievably lost because of damage to the visual nerve fibers, our efforts should be directed toward the early recognition of this disease. The purpose of this paper is singularly simple—to assist the general practitioner in recognizing glaucoma in its early stages.

Primary and Secondary Glaucoma

There are various types of glaucoma (Table 1). If the intraocular pressure rises "spontaneously" it is euphemistically termed primary or idiopathic. If the cause is known it is called secondary.

TABLE 1.
CLASSIFICATION

I. Primary (80%)
A. Acute (Narrow Angle)
B. Chronic (Wide Angle)
II. Secondary (20%)

The secondary glaucoma following inflammation, trauma, tumor, and hemorrhage, are unique problems that will not be elaborated here, but will be described in a subsequent publication.

Primary Glaucoma May Be Acute or Chronic

Over 80 per cent of all glaucomas are of the primary type. The acute type, about 15 per cent of all primary glaucoma, presents no difficulty in diagnosis: intense pain in the globe, dilated pupil, nausea and vomiting, deep congestion of the globe, haziness of the corneal epithelium causing the patient to see "haloes" around lights. This form of glaucoma is an emergency which requires immediate referring of the patient to an ophthalmologist for medical care and surgery, usually an iridectomy.

Chronic Primary Glaucoma

Our major concern here is with the most common type of glaucoma—chronic primary glaucoma. This is a painless, insidious disease which strikes without warning. Because of the painless nature of this type of glaucoma, it is urgent that the general practitioner should become familiar with its diagnosis (Table 2).

TABLE 2.
DIAGNOSIS

1. Visual Acuity
2. Visual Fields
3. Tonometry
4. Ophthalmoscopy

Any complete physical examination includes a simple test of vision—reading a letter chart. But since glaucoma destroys peripheral vision before central vision, a finding of 20/20 does not exclude glaucoma. Visual fields, showing an enlarged

* Department of Ophthalmology, Tulane University School of Medicine, New Orleans 12, Louisiana.

blind spot, arcuate scotomata, and peripheral contractions obviously are indicative of glaucoma. Most general practitioners cannot, however, find time to do a painstaking examination of visual fields on each patient he examines. How, then, does he make the diagnosis? There are two ways, both simple and rapid: tonometry and ophthalmoscopy.

Use of Tonometry and Ophthalmoscopy

A tonometer (Fig. I) is an instrument which measures the intraocular pressure.

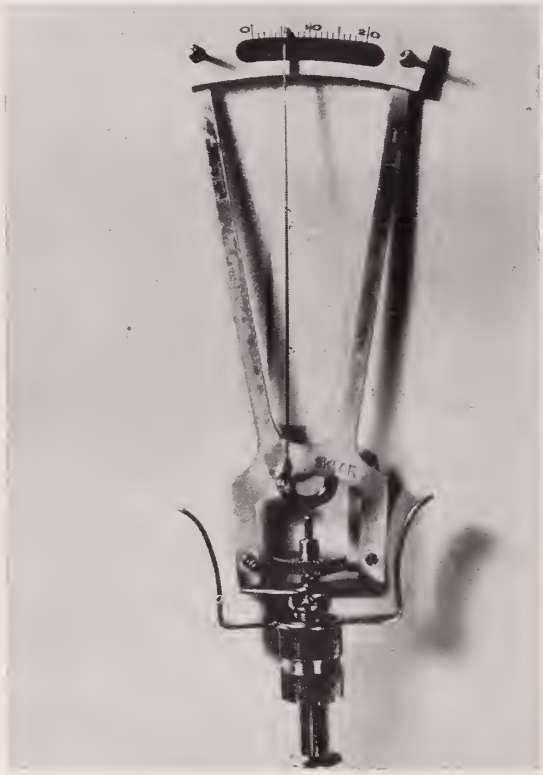


Figure I.

It is inexpensive and simple to use. A drop of local anesthetic (Ophthaine-Squibb) is placed in the eye, and after one minute the tonometer is placed on the cornea (Fig. II). Any elevation of intraocular pressure, as indicated by this instrument, is presumptive evidence of glaucoma.

Ophthalmoscopy, a valuable tool to any physician, is especially effective in diagnosing glaucoma. In glaucoma of any appreciable duration, the optic disc shows characteristic changes (Fig. III). The earliest glaucomatous change in the disc



Figure II.

appears as a narrowing of the outside rim. The temporal retinal vessels lose their sloping configuration and bend more sharply into the cup. This widening and deepening of the optic cup is associated with the pallor or atrophy of the nerve fibers leading to nasal displacement of the vessels.



Figure III.

Management of Glaucoma

To understand the management of glaucoma, a very brief review of ocular anatomy and the formation and flow of aqueous humour is necessary (Fig. IV). The

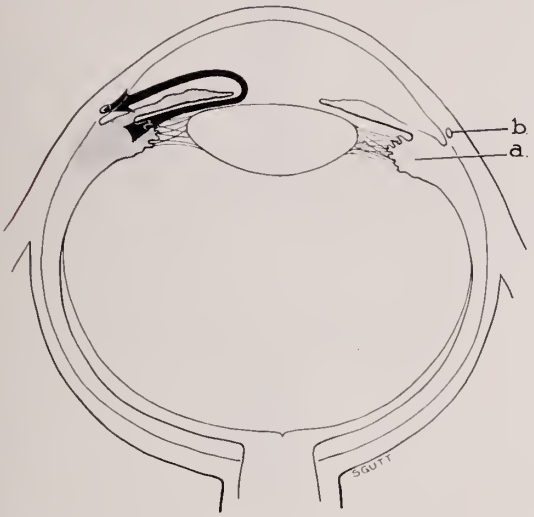


Figure IV.

aqueous humour, which fills the anterior chamber of the eye, is formed by the epithelium of the ciliary body. (a). This fluid passes through the pupil and out of the eye through Schlemm's canal. (b). When there is an obstruction to the flow of this fluid, the pressure within the eye rises. In narrow angle glaucoma the root of the iris blocks the narrow inlet into the filtration angle of the anterior chamber, in inflammatory glaucomas there may be adhesions between the iris and the lens (posterior synechiae) that prevent the normal passage of aqueous from the posterior chamber through the pupil into the anterior chamber, but the most common site of obstruction is the trabeculum or filtration angle itself. This latter point of obstruction is the one encountered in chronic open angle glaucoma.

The treatment of glaucoma (Table 3) is directed toward re-establishing the normal drainage of aqueous humour from the eye.

TABLE 3.
TREATMENT

1.	Miotics
2.	Carbonic Anhydrase Inhibitors
3.	Surgery

Use of Drugs

Miotics such as pilocarpine, carbachol, prostigmin, phospholine iodide, and Humorsol reduce elevated intraocular tension by improving the facility of outflow of aqueous. The mechanism of miotic action in narrow angle glaucoma is the constriction of the pupil. Such miosis pulls the iris away from the trabeculae, allowing the aqueous to escape. The mode of action of miotics in open angle glaucoma is considerably more complex. Widening of an already open angle should not result in any appreciable increase of aqueous outflow. The alteration in ocular tension that results from the action of miotics cannot be completely explained on a simple mechanical basis. The neuromuscular effects of miotics in the treatment of glaucoma are as yet poorly understood. Nevertheless, it can be said that miotics do allow the aqueous to enter Schlemm's canal and escape from the eye. When the intraocular pressure is not controlled by miotics alone, the carbonic anhydrase inhibitors such as Diamox, Daranide, and Neptazane, drugs that help lower the intraocular pressure by decreasing the amount of aqueous formed by the ciliary body, are added to the treatment, thereby diminishing the demand on an inadequate drainage system. Levorotatory epinephrine bitartrate also lowers the intraocular pressure by decreasing the rate of aqueous secretion. In combination with miotics, epinephrine also increases the rate of aqueous outflow. Glaucoma not controlled by miotics and drugs such as Diamox and epinephrine, may require surgical intervention.

Surgery attempts to open a new drain-



Figure V.

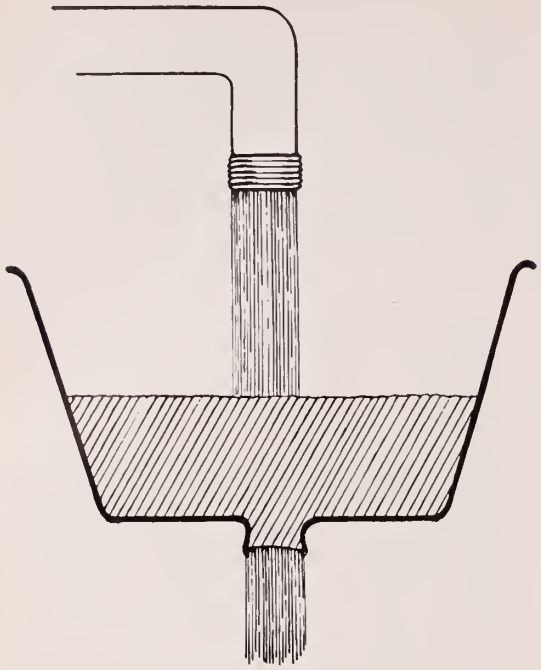


Figure VI.—Normal

age canal to allow aqueous to escape from the eye. (Fig. V).

Glaucoma Analogous to In-Flow and Out-Flow of Water

A simple analogy may help to clarify this treatment. The eye may be compared to a sink having a normal pressure or

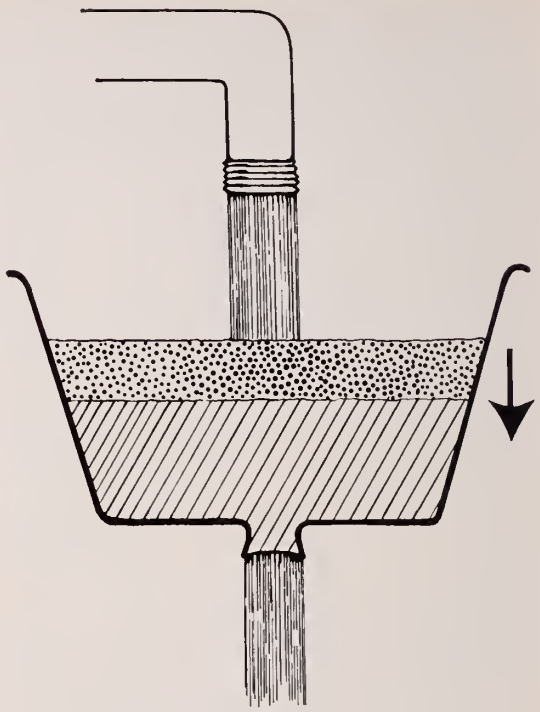


Figure VIII.—Drano eyedrops

fluid level. As long as the fluid entering this sink is being drained out at an equal rate, the fluid level remains constant. (Fig. VI). If, as in glaucoma, the opening which drains the fluid out of the sink is clogged up, the fluid level (pressure) in

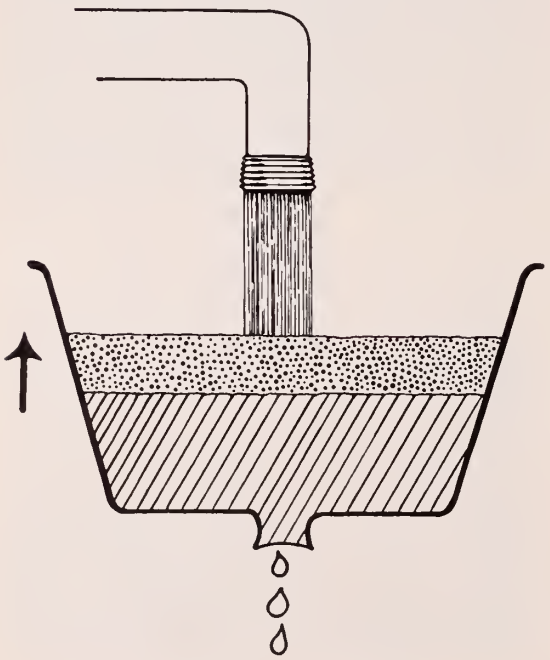


Figure VII.—Glaucoma

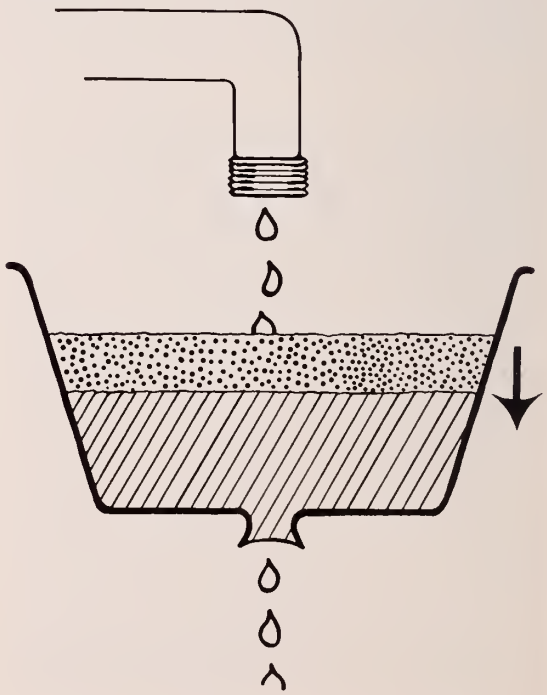


Figure IX.—Slow down faucet (tablets)

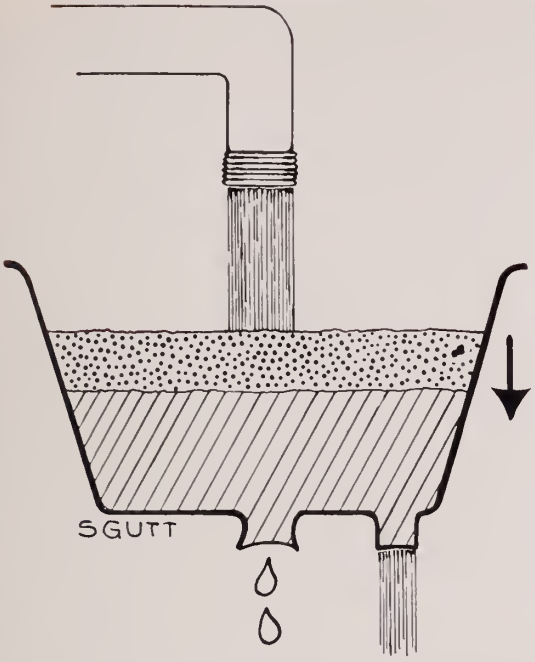


Figure X.—New drain (surgery)

the sink rises (Fig. VII). Adding "Drano" (miotics) serves to open this drain, restoring a normal fluid level (Fig. VIII). If the "Drano" does not adequately open the clogged drain, the amount of fluid entering the sink may be diminished by partially closing the faucet (carbonic anhydrase inhibitors), again allowing the water level (pressure) to return to normal. (Fig. IX). If the combination of both these forms of treatment fails to control the fluid level, it is necessary to construct a new drain by surgery. (Fig. X).

Summary

The general practitioner is in a unique position to recognize glaucoma in its early stages by introducing tonometry and ophthalmoscopy into his general physical examination. Both procedures are simple, rapid, and accurate. Thus, the general practitioner can offer a more complete physical examination to his patients, discover glaucoma in its early stages, and thereby prevent much needless and preventable loss of vision.

To Test . . . and When and How to Test

Out of the wisdom of the Congress and the Food & Drug Administration, what are they ultimately going to consider substantial evidence that a drug does not have toxic side effects sufficient to warrant it from being kept off the market, or to decide what is substantial evidence of efficacy. We are going to have a merry time. . . . We are going to have to determine just how many tests will have to be made on how many different kinds of animals, disregarding the human, before the drug will be considered safe. We all know that the ultimate test must be made on a pregnant mouse or a rabbit, or a rat, or a dog, or a chicken, or even a monkey, that will prove with certainty that that very drug might not have disastrous effects on some human being, her condition of pregnancy, if it is a woman, and many other factors. All of this is going to mean in the end a tremendous new burden placed upon the pharmaceutical industry.—Morris Fishbein, M. D., at fourth annual New Jersey Pharmaceutical Industry Day, Union, N. J., Oct. 25, 1962.

The Journal of the Louisiana State Medical Society

Established 1844

Published by The Journal of the Louisiana State Medical Society, Inc. under the jurisdiction of the following named Journal Committee:

George H. Hauser, M. D., Ex-Officio
J. E. Knighton, M. D., Chairman
Sam Hobson, M. D., Secretary
H. H. Hardy, Jr., M. D.
M. D. Paine, Jr., M. D.

EDITORIAL STAFF

PHILIP H. JONES, M. D., Editor

COLLABORATORS—COUNCILORS

Nicholas J. Chetta, M. D.
J. E. Clayton, M. D.
Guy R. Jones, M. D.
C. E. Boyd, M. D.
Frederick A. Marx, M. D.
John L. Beven, M. D.
J. Y. Garber, M. D.
R. E. C. Miller, M. D.

C. GRENES COLE, M. D., General Manager
1430 Tulane Avenue

Subscription Terms: $4.00 per year in advance, postage paid, for the United States; $5.00 per year for all foreign countries belonging to the Postal Union.

News material for publication should be received not later than the eighteenth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

Manuscripts should be addressed to the Editor, 1430 Tulane Ave., New Orleans, La.
The Journal does not hold itself responsible for statements made by any contributor.

Editorial

The Battered Child Syndrome

"MAN'S INHUMANITY TO MAN
MAKES COUNTLESS THOUSANDS
MOURN."

Robert Burns

Cruelty in whatever form it may appear is abhorrent to the physician who is worthy of the name and to all other altruists. When infants and helpless children are the victims of cruelty, it is even more revolting. That such may take on the complexion of a medical problem may be a surprise. Even so, it is fitting that the problem and the many situations associated with it should be presented to the medical profession. This has been done effectively in four recent publications.[1-4]

Proper understanding of infectious and nutritional diseases of infancy and childhood has served to bring out by contrast the significance of accidental and intentional trauma in infancy and early childhood as the cause of severe disability and death. The paper by Kempe et al., gives a medical description of the syndrome, and presents for the first time some numerical data which are startling. The battered child syndrome has been defined as, "As that constellation of symptoms which viewed together unerringly points to a medical diagnosis of a physically abused child." The Children's Division of the American Humane Association undertook to collect data upon the problem, and as one index of the incidence of child abuse, collected newspaper reports from the entire country for the year 1962. One authority stated that for every battered child who enters a hospital, there must be a hundred not getting medical care. Those instances which reach the newspaper were studied as regards the circumstances concerning the child and also in regard to the orientation of the community with reference to such abuse.

The number of injured children for the year was 662, and these were found in 557 families. They ranged in age from early infancy through age 17. Barely 10 per cent of the children involved were over 10 years of age. Fifty-five and seven tenths per cent of the abused children were under 4 years of age. Slightly more

than one in every four children or a total of 178 died as a result of their injuries. Eighty one per cent of those who died were under 4 years of age, and 54 per cent were under 2 years of age. Fathers were responsible for 38.25 per cent of the injuries and 22.22 per cent of the fatalities. Mothers inflicted injuries in 28.86 per cent of the cases, and were responsible for 48.54 per cent of the fatalities. The parents separately or together were responsible for 72.57 per cent of the injuries and 75.85 per cent of the fatalities. The stepmother was responsible for inflicting injuries in only 2.65 per cent of the total number and 3.51 per cent of the fatalities.

Types of abuse included nearly all forms of trauma except firearms. Broken bones were common, head injuries and subdural hematomas were frequent, and diffuse, severe damage to internal organs was responsible for many fatalities. These crimes were committed in every state but two, and in all sections of our socio-economic structure. The average age for the mother was found to be 26 years, and that for the father was 30.26. Investigation pointed to emotional immaturity as probably the greatest single cause for the destructible parental behavior. Mental illness was present in a significant group. Emotional instability was recorded as being expressed in four groups of situations. These were: emotional explosion, acute depression, mercy killings; and convalescing parents. Most instances of the latter group include the actions of parents recently released from care in the hospital for mental illness, who within a few days injured or killed their children. The view, however, taken by one who sees the problem as a whole is that these parents or other perpetrators of such crimes are inherently psychotic, and that the offense is not merely the expression of a temporary stress situation, or also called situation psychosis.

The clinical aspects of this battered child syndrome present unusual difficulties. It would be expected that only a master clinician experienced in the disorders of childhood would be able to detect the discrepency between the physical and other findings on the one hand, and the inadequate and suppressed history on the other. The most important requirement for the recognition of this syndrome would be the knowledge that such things exist, and a high index of suspicion on the part of the physician. Important considerations however are that the history or the evidence or both, are repetitive. An additional point is that every subdural hematoma should have x-rays of the bones immediately after hospitalization and again in 10 to 14 days. The third group of findings consisting of bruises, broken nose, ecchymoses and healed fractures should arouse suspicion. The same is true of the appearance of being chronically ill or underweight. Additionally, as shown by the figures given above, the more helpless the child or baby, the greater chance there is of physical abuse having been committed by an adult. The x-ray affords the most important objective findings, and accurate criteria have been advised for their interpretation. Direct injury may produce gross fractures, dislocations and epiphyseal separations. In whatever manner gross damage has occurred, no sign of bone injury may be found in the first week. The osseous changes become manifest in 12 to 15 days. New bone reaction may suggest neoplastic disease.

It has been stated that the most important diagnostic radiologic sign of the syndrome is evidence of repetition. Multiple bone abnormalities in various stages of repair can be recognized as such. Kempe states that distribution of lesions in the abused child is unrelated to rates of growth and "An extensive lesion may be present at the slow-growing end of a bone, which otherwise is normally mineralized, and shows no metabolic disorder at its rapidly-growing end". The presence of large calcifying subperiosteal hemorrhages may be due to trauma or scurvy. In scurvy, however, the osteoporosis is generalized, and in trauma the Vitamin C content of the blood is normal. Bony lesions of congenital syphilis tend to be symmetrical. Osteogenesis imperfecta has bone changes

which may be confused with those of trauma. The pattern of ossification in the skull is stated as being a differential point.

Another condition which must be differentiated is infantile cortical hyperostosis. Kempe states that the metaphyseal lesions of unrecognized trauma easily serve to differentiate the two conditions. He considers that "Radiologic manifestations of trauma are specific, and the metaphyseal lesions in particular occur in no other disease of which we are aware".

When a physician has marshalled enough evidence to warrant a diagnosis of willful trauma, the safety of the child demands proper use of the knowledge he has obtained.

California has a law making it mandatory that such circumstances be reported. Similar laws are being advised for other states. It is obvious that the physician should report objective findings which can be verified, and if possible be supported by photographs and roentgenograms. The reports should not comment upon who committed the abuse. The physician's duty to the child involves a heavy responsibility, but by discharging this responsibility the physician may be giving the child his only chance to live. The syndrome of the battered child is a most difficult challenge to the profession.

1. Kempe, C. H., et al.: "The Battered-Child Syndrome", JAMA 181:17, July 1962.

2. Gwinn, J. L., M. D., et al.: "X-ray Manifestations of Unsuspected Trauma in Infancy", JAMA 176:926, June 17, 1961.

3. De Francis, Vincent: "Child Abuse, Preview of a Nationwide Survey", Children's Division, The American Humane Association, P. O. Box 1266, Denver, Colorado.

4. Merrill, Edgar J.; Kaufman, Irving, M. D.; Didge, Philip R., M. D.; and Schoepfer, Arthur E.: "Protecting the Battered Child", The American Humane Association, P. O. Box 1266, Denver, Colorado,

ORGANIZATION SECTION

The Executive Committee dedicates this section to the members of the Louisiana State Medical Society, feeling that a proper discussion of salient issues will contribute to the understanding and fortification of our Society.

An informed profession should be a wise one.

CHAIRMEN OF COMMITTEES
1963-64

Standing Committees

ARRANGEMENTS
Dr. E. M. Harrell, Lafayette

BUDGET AND FINANCE
Dr. Emmett L. Irwin, New Orleans

COMMITTEES
Dr. J. Kelly Stone, New Orleans

CONGRESSIONAL MATTERS
Dr. H. Ashton Thomas, New Orleans

JOURNAL
Dr. J. E. Knighton, Shreveport

MATERNAL WELFARE
Dr. C. F. Bellone, New Orleans

MEDICAL DEFENSE
Dr. C. B. Erickson, Shreveport

MEDICAL EDUCATION
Dr. P. H. Jones, New Orleans

MEDICAL TESTIMONY
Dr. Henson S. Coon, Monroe

PUBLIC POLICY AND LEGISLATION
Dr. Joseph A. Sabatier, Jr., Baton Rouge

SCIENTIFIC WORK
Dr. C. Grenes Cole, New Orleans

Special Committees

ACCREDITATION
Dr. H. H. Hardy, Jr., Alexandria

AID TO INDIGENT MEMBERS
Dr. Cuthbert J. Brown, New Orleans

ALCOHOLISM
Dr. Broox C. Garrett, Shreveport

AMA-ERF
Dr. M. E. St. Martin, New Orleans

ASSISTANCE TO MEDICAL STUDENTS
Dr. A. V. Friedrichs, New Orleans

BLOOD BANKS
Dr. John L. Beven, Baton Rouge

CANCER
Dr. Ambrose H. Storck, New Orleans

CHILD HEALTH
Dr. Norman J. Robinson, New Orleans

CHRONIC DISEASES
Dr. Morell W. Miller, New Orleans

DIABETES
Dr. Philip B. Johnson, New Orleans

DOMICILE
Dr. L. Sidney Charbonnet, Jr., New Orleans
ESTABLISHMENT OF HALL OF FAME FOR MEDICINE IN LOUISIANA
Dr. H. Ashton Thomas, New Orleans
FEDERAL MEDICAL SERVICES
Dr. I. W. Gajan, Jr., New Iberia
GERIATRICS
Dr. M. E. St. Martin, New Orleans
HISTORIAN
Dr. P. H. Jones, New Orleans
HOSPITALS
Dr. Leo J. Kerne, New Orleans
IMMUNIZATION
Dr. P. H. Jones, New Orleans
INDUSTRIAL HEALTH
Dr. M. D. Paine, Jr., New Orleans
INSURANCE
Dr. J. Morgan Lyons, New Orleans
LECTURES FOR COLORED PHYSICIANS
Dr. Robyn Hardy, New Orleans
LIAISON WITH LOUISIANA HOSPITAL AND LOUISIANA NURSES ASSOCIATIONS
Dr. P. H. Jones, New Orleans
LIAISON WITH LOUISIANA STATE BAR ASSOCIATION
Dr. Daniel M. Kingsley, Alexandria
LIAISON WITH LOUISIANA STATE NURSES ASSOCIATION
Dr. C. Walter Mattingly, New Orleans
LIAISON WITH MEDICAL SCHOOLS
Dr. P. H. Jones, New Orleans
LOUISIANA ORGANIZATIONS FOR STATE LEGISLATION
Dr. Daniel J. Fourrier, Baton Rouge
MEDIATION
Dr. Nicholas J. Chetta, New Orleans
MEDICAL AND HOSPITAL SERVICES IN RE INSURANCE CONTRACTS
Dr. P. H. Jones, New Orleans
MENTAL HEALTH
Dr. N. Judson Bender, Shreveport
NATIONAL EMERGENCY MEDICAL SERVICE (CIVIL DEFENSE)
Dr. Moss M. Bannerman, Baton Rouge
NEUROPSYCHIATRIC SERVICE AT CHARITY HOSPITALS
Dr. P. H. Jones, New Orleans
NOMINATIONS
Dr. H. Ashton Thomas, New Orleans
PUBLIC HEALTH OF THE STATE OF LOUISIANA
Dr. James R. Strain, Shreveport
REVISION OF CHARTER, CONSTITUTION AND BY-LAWS
Dr. A. V. Friedrichs, New Orleans
RURAL AND URBAN HEALTH
Dr. Guy R. Jones, Lockport
SCHOOL HEALTH
Dr. Rafael C. Sanchez, Metairie
SCIENTIFIC SESSIONS ATTENDANCE
Dr. M. E. St. Martin, New Orleans
STATE DEPARTMENT OF PUBLIC WELFARE (ADVISORY)
Dr. H. H. Hardy, Jr., Alexandria
STATE GOVERNMENT HEALTH SERVICES
Dr. Walter Moss, Lake Charles
STATE HOSPITAL POLICIES AND MEDICAL INDIGENCY
Dr. W. Robyn Hardy, New Orleans
TETANUS PROTECTION
Dr. James C. Decuers, New Orleans
WOMAN'S AUXILIARY
Dr. C. Grenes Cole, New Orleans
COUNCIL ON MEDICAL SERVICE AND PUBLIC RELATIONS
Dr. Richard L. Buck, New Orleans

INSURANCE INFORMATION

More than 141 million Americans — 76 per cent of the civilian population—had some form of health insurance at the end of 1962, the Health Insurance Council said recently in reporting on its 17th annual survey of the extent of voluntary health insurance coverage in the United States. The survey is based on reports from insurance companies, government agencies, and medical societies, and conservative Council estimates for Blue Cross, Blue Shield organizations.

The Council said both the number of persons covered, and the amount of benefits paid by health insurance, reached new highs last year. Coverage increased 4.6 million during 1962 to reach a total of 141,151,000.

Benefit payments by all health insuring organizations to help cover the cost of hospital, surgical and medical care amounted in 1962 to nearly $6.2 billion, up $629 million over 1961, said the Council. In addition, persons with loss-of-income policies received $906 million in benefits from insurance companies to replace income lost through disability.

Thus, a grand total of $7,077,000,000 in health insurance benefits were distributed during 1962, up 10.6 per cent over 1961.

A breakdown of the number of persons with health insurance at the end of 1962, by type of coverage and type of insuring organization (based on the various reports to the Council, and the Council estimates for Blue Cross - Blue Shield), follows.

Hospital expense insurance was provided by insurance companies to 85,174,000 persons; by Blue Cross - Blue Shield and similar groups to 60,280,000, and by other health care plans to 6,993,000. After deducting persons protected by more than one type of insuring organization, the Council reported that 141,151,000 persons had hospital insurance, a 3.4 per cent increase over the 136,522,000 persons so covered at the end of 1961.

Surgical expense insurance by insurance companies covered 81,983,000 persons; by Blue Cross - Blue Shield and similar groups 51,769,000, and by others 8,241,000. Allowing for duplication, 131,185,000 persons had surgical insurance, a 3.3 per cent boost over the 126,940,000 persons of 1961.

Regular medical expense insurance accounted for 48,093,000 persons through Blue Cross - Blue Shield and similar groups; 47,010,000 through insurance programs, and 8,343,000 through other plans for a total, eliminating duplications, of 98,204,000 persons, a 4.2 per cent climb over the 94,209,000 persons in 1961.

Major medical expense insurance coverage through insurance company programs increased 12 per cent, from 34,138,000 to 38,250,000 per-

sons. Major medical insurance is designed to help absorb the cost of serious illnesses, and pays benefits up to $10,000, $15,000 or more for all areas of care prescribed by a physician.

Loss of income insurance saw 33,602,000 persons covered by insurance company policies. The number of persons who work where there are formal sick leave arrangements brought the total figure to 44,902,000 persons, a 4.3 per cent climb over 1961.

MEDICAL NEWS SECTION

CALENDAR

PARISH AND DISTRICT MEDICAL SOCIETY MEETINGS

Society	Date	Place
Ascension	Third Tuesday of every month	
Calcasieu	Fourth Tuesday of every other month	Lake Charles
East Baton Rouge	Second Tuesday of every month	Baton Rouge
Jefferson	Third Thursday of every month	
Lafayette	Second Tuesday of every month	Lafayette
Lafourche	Last Tuesday of every other month	
Morehouse	Third Tuesday of every month	Bastrop
Natchitoches	Second Tuesday of every month	
Orleans	Second Monday of every month	New Orleans
Ouachita	First Thursday of every month	Monroe
Rapides	First Monday of every month	Alexandria
Sabine	First Wednesday of every month	
Tangipahoa	Second and fourth Thursdays of every month	Independence
Second District	Third Thursday of every month	
Shreveport	First Tuesday of every month	Shreveport
Vernon	First Thursday of every month	

TENTH ANNUAL PAUL A. TURNER MEMORIAL LECTURE

Dr. Oscar Auerbach, Senior Medical Investigator, Veterans Administration Hospital, East Orange, New Jersey and Professor of Pathology, New York Medical College, will present the Tenth Annual Paul A. Turner Memorial Lecture at 3:00 P.M., Sunday, November 17, 1963 at the Monteleone Hotel, New Orleans, during the 20th annual meeting of the Southern Chapter of the American College of Chest Physicians. Dr. Auerbach will speak on "Pulmonary Fibrosis and Emphysema in Relationship to Smoking".

All physicians are invited to attend. A copy of the program for the meeting may be obtained by addressing the American College of Chest Physicians, 112 East Chestnut Street, Chicago, Illinois 60611.

RESEARCH SUPPORT APPLICATIONS FOR 1964 FISCAL YEAR NOW AVAILABLE FROM AMERICAN HEART ASSOCIATION

Applications from research investigators for support of studies to be conducted during the fiscal year beginning July 1, 1964, are now being accepted by the American Heart Association.

The deadline for submitting applications for Advanced Research Fellowships and Established Investigatorships is September 15, 1963.

Applications in the Grants-in-Aid category must be received by November 1, 1963.

Further information and application forms for awards may be obtained from the Director for Research, American Heart Association, 44 East 23rd Street, New York 10, New York.

NATIONAL RURAL HEALTH CONFERENCE

The Council on Rural Health of the American Medical Association invites you to attend the **16th National Rural Health Conference** at the Arlington Hotel, Hot Springs, Arkansas, September 20-21, 1963. The Conference will convene at 10 a.m. Friday and conclude at noon on Saturday. Registration opens at 8 a.m. Friday. There is no registration fee.

Among the many program subjects to be discussed are: Who Shares Your Health Dollar; Newer Concepts and Challenges in Mental Health; Oral Hygiene; What not to do before you see your Doctor; Immunization; Animal Diseases Transmissible to Man; Hattieville, Arkansas Rural Community Improvement Project. Ample time will be devoted to audience participation at each session.

Cooperating organizations: State Agricultural Extension Services, American Farm Bureau Federation, National Grange, State Medical Societies, State Health Departments, and Allied Health Organizations.

TOURO TO SPONSOR LECTURE SERIES IN PSYCHIATRY FOR THE NON-PSYCHIATRIST

A lecture and discussion period series entitled, "Psychiatry for the Non-Psychiatrist" will be sponsored by the Department of Neurology and Psychiatry at Touro Infirmary, announced Dr. Gene L. Usdin.

Dr. Usdin, chairman of Touro's Department of Neurology and Psychiatry, said that the sessions would be held at 8:00 p.m. on six consecutive Monday nights. The meetings have been scheduled for September 16, 23, 30 and October 7, 14, and 21. Registration fee for the series, which will be held in Lecture Room A at Touro, will be $20.00 per individual.

Dr. Usdin added that among the guest speakers will be Dr. Richard Schmidt, Professor and Chairman of the Department of Medicine, University of Florida School of Medicine, Gainesville, Florida, and Dr. William Sheely, Chief of the American Psychiatric Association, General Education Project, Washington, D. C. Each program will be divided into a lecture period, a question and answer period followed by small group discussion periods with discussion leaders.

275 DOCTORS RECEIVE CHEST PHYSICIANS CERTIFICATES

Certificates of Fellowship in the American College of Chest Physicians were conferred upon 275 physicians during convocation ceremonies at the 29th Annual Meeting of the College in Atlantic City.

Nearly 800 physicians, their wives and guests attended the impressive ceremony on Sunday, June 16th. The meeting, held June 13-17 at the Ambassador Hotel was attended by 1,821 physicians and guests.

Physicians from Louisiana who received certificates were Drs. Charles P. Oderr and Irving L. Rosen, both of New Orleans.

The College is an International society with nearly 8,000 members in 89 countries and territories throughout the world. Mr. Murray Kornfeld, Chicago, is Executive Director.

POSTGRADUATE SEMINAR IN ANESTHESIOLOGY

The University of Miami and University of Florida Schools of Medicine will present their First Annual Postgraduate Seminar in Anesthesiology in Miami Beach, Florida, on January 5-8, 1964.

The theme for the seminar is **"The Cardiovascular System"** and although the problems of this system in relation to anesthesia will be stressed, the subjects presented are of vital interest to all phases of medical practice. The program will consist of five panel discussions; (1) Physiological considerations in circulation, (2) Recent advances in management of cardiac arrest, (3) Pharmacological considerations related to circulation, (4) Surgical and anesthetic management of the patient with heart disease, (5) Symposium on hemorrhagic and septic shock.

The panel participants will represent the medical specialties of Internal Medicine, Surgery, Pharmacology and Anesthesiology.

Further information and programs may be obtained by writing to Dr. Frank Moya, Department of Anesthesiology, Jackson Memorial Hospital, Miami 36, Florida.

SCHOLARSHIP AWARDED TULANE STUDENT

James Edwin Fulton, Jr., of 443 Lido Soud, Newport Beach, California, a second-year student at Tulane University School of Medicine, has been awarded a $600 Student Scholarship for research and clinical training in the field of allergy by the Allergy Foundation of America. Mr. Fulton will carry out his work under Dr. Vincent J. Derbes, Professor of Dermatology and Director of Division of Allergy and Dermatology at the University.

Mr. Fulton's scholarship was made possible by Burroughs Wellcome & Co. (U.S.A.) Inc., of Tuckahoe, New York.

Mr. Fulton was born in Ottumwa, Iowa and received his B.S. degree in 1962 from Tulane University, graduating Phi Beta Kappa.

The subject of Mr. Fullton's proposed research is "Altered Tissue Mast Cells in Delayed Hypersensitivity".

SPECIAL NOTICE

Part I Examination (written), commencing in 1965, will be conducted in July at designated centers in the United States and Canada. Requirements, application, procedure, fees, etc., will be published in the 1964 Bulletin.
Candidates whose residency will be completed on or before June 30, 1965 will be eligible to make application to take the examination in July, 1965.

The 1963 Bulletin of this Board is now available and prospective applicants are urged to request this brochure and thoroughly familiarize themselves with the current rules and regulations before making application. Bulletins may be obtained by writing to—Robert L. Faulkner, M. D., Executive Secretary and Treasurer, American Board of Obstetrics and Gynecology, 2105 Adelbert Road, Cleveland 6, Ohio.

Diplomates of this Board are requested to inform the Secretary's office of any change in address.

BOOK REVIEWS

Bronchial Asthma: Its Diagnosis and Treatment; by Albert H. Rowe and Albert Rowe, Jr. C C Thomas, 1963. 250 p. $11.00.

This fairly comprehensive monograph is directed at those clinicians who see adult and pediatric asthmatics in their clinical practice. The emphasis in this book is on the allergic basis of asthma and the authors draw on many years' experience in a private allergy practice. Throughout the book the point is made that food allergy is not sufficiently sought after in asthmatic patients and in the authors' opinion accounts for approximately 50 per cent of allergic asthma. There is a general de-emphasis in this work on infective and psychological factors in the etiology of allergic asthma. It is stated that there is no good evidence to support the thesis that bacterial allergy plays an important role in this condition.

The discussion of pulmonary function in bronchial asthma is somewhat superficial and has the disadvantage that it suggests that the progression of bronchial asthma can be accurately followed by serial ventilatory studies. Spontaneous variations in the degree of obstruction in these patients makes it very hazardous to ascribe improvement in this ventilatory parameter to any specific therapy.

There is much recapitulation in this book and excellent summaries, all of which add to the value of this work for teaching. There are also useful charts which indicate regional allergenic plants, including trees, grasses and weeds. There is a large appendix, in which is discussed elimination diets, methods of making allergenic extracts and some of the immunology involved in this disease.

This book is very informative and is recommended highly to all physicians who manage bronchial asthma patients.

HANS WEILL, M. D.

Dissemination of Cancer: Prevention and Therapy; by Warren H. Cole, M. D., Gerald O. McDonald, M. S., M. D.; Stuart S. Roberts, M. S., M. D.; and Harry W. Southwick, M. D. Appleton-Century Croft, Inc., New York, 1961. 462 pages, illustrated. $12.75.

This monograph by Cole and his colleagues at the University of Illinois is divided into eleven main parts, beginning with factors important in the growth and spread of cancer, its natural history, mode of spread, the role of stress, hormones, immunology, chemotherapy on the dissemination of cancer, and finally the preventive measures in the treatment of cancer. The material covered in this book is seldom found collected into one convenient volume and usually must be obtained from many sources.

Its most valuable aspect is the attempt in which a detailed review of experimental investigations in cancer is presented to correlate with the practical problems of cancer control.

There are several excellent illustrated patient histories to emphasize the importance of spread of cancer by the different routes as well as the role of stress and immunology in the resistance to cancer. Therapeutic measures for destruction of disseminated cancer cells by chemotherapy, although still experimental, are discussed as well as host resistance factors and immunology of cancer the destruction of cancer cells. In the last chapter, some of the precautionary measures which may prevent the spread of cancer cells during diagnostic and therapeutic procedures are summarized.

The book is profusely illustrated with drawings, graphs and photographs, a few in color, and leans heavily towards the research aspects of cancer. It will be a valuable reference for all surgeons and students interested in thorough understanding of the fundamental factors of both laboratory and clinical problems of cancer dissemination and control.

GLENN M. KOKAME, M. D.

PUBLICATIONS RECEIVED

(Certain ones of these will be selected for review)

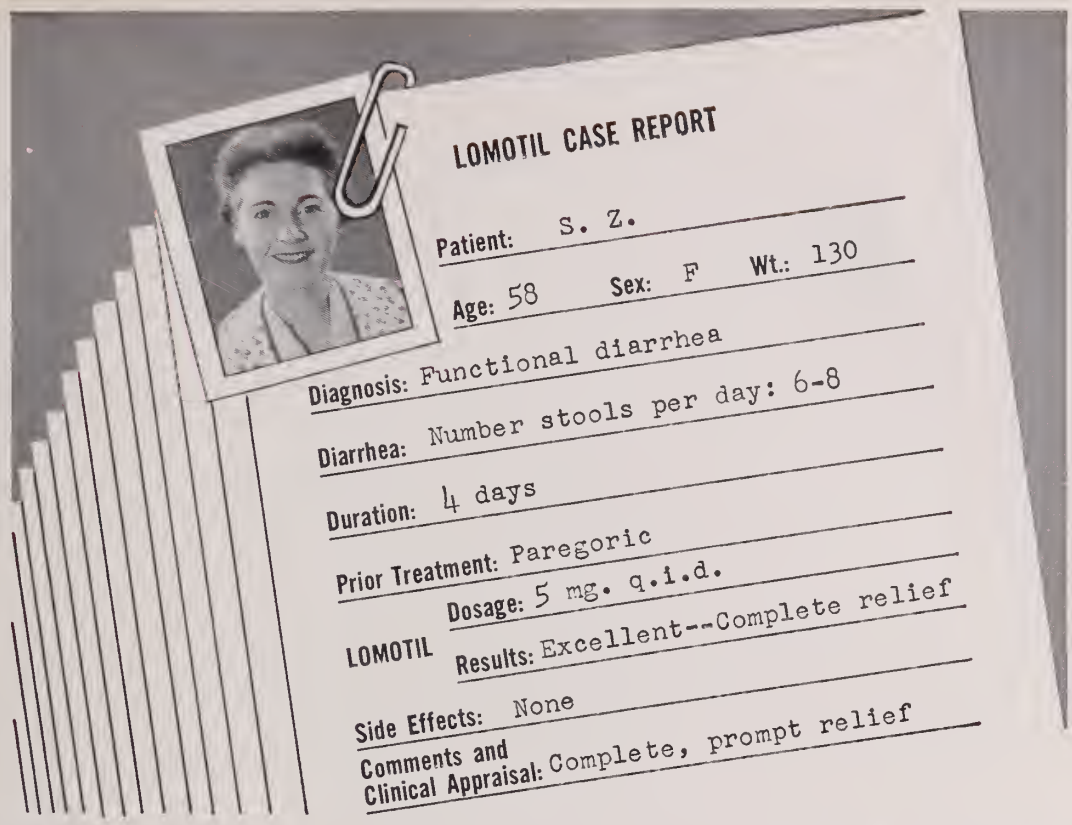
C. V. Mosby Co., St. Louis: Handbook of the Practice of Anesthesia, by John R. S. Shields, M. B.; Synopsis of Ear, Nose, and Throat Diseases, by Ryan, Thornell, and von Leden (2nd edit.).

Office of the Surgeon General, Department of the Army, Washington: Organization and Administration in World War II, Col. John Boyd Coates, Jr., Editor-in-Chief; Preventive Medicine in World War II, Volume VI, Communicable Diseases, Malaria, prepared and published under the direction of Lt. General Leonard D. Heaton.

Prentice-Hall, Inc., Englewood Cliffs, N. J.: The Population Dilemma, edited by Philip H. Hauser.

W. B. Saunders Co., Phila.: Pediatric Cardiology, by Alexander S. Nadas, M. D. (2nd edit.); Results of Surgery for Peptic Ulcer: A Cooperative Study by Twelve Veterans Administration Hospitals, edited by R. W. Postlethwait, M. D.; Cecil-Loeb Textbook of Medicine, edited by Paul B. Beeson, M. D. and Walsh McDermott, M. D. (11th edit.); Clinical Examinations in Neurology, Mayo Clinic and Mayo Foundation, (2nd edit.); Diseases of the Chest, by H. Corwin Hinshaw, M. D. and L. Henry Garland, M. D. (2nd edit.).

Charles C Thomas, Springfield, Ill.: Occlusion of the Superior Mesenteric Artery, by Benjamin B. Jackson, M. D.



To control diarrhea...promptly

prescribe LOMOTIL® promptly

Each tablet and each 5 cc. of **liquid** contains: 2.5 mg. of diphenoxylate hydrochloride (Warning: may be habit forming) and 0.025 mg. of atropine sulfate

The direct, well-localized activity of Lomotil relieves spasm and cramping and provides prompt symptomatic control of virtually all diarrheas.

Numerous investigators have remarked on the effectiveness of Lomotil in patients with diarrhea uncontrolled by other agents.

Weingarten and his associates[1] found it "an excellent drug . . . efficacious where other drugs have failed. . . ."

Hock[2] obtained "results superior to prior medications in 68.3 per cent of 41 patients."

Since Lomotil controls diarrhea so consistently, it is only rational to prescribe Lomotil *before* other agents have a chance to prove inadequate. To control diarrhea promptly, prescribe Lomotil promptly.

Lomotil is an exempt narcotic, its abuse liability being comparable to that of codeine. Recommended dosages should not be exceeded. Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness and insomnia. Lomotil should be used with caution in patients with impaired liver function and in patients taking addicting drugs or barbiturates. Lomotil is brand of diphenoxylate hydrochloride with atropine sulfate; the subtherapeutic amount of the latter is added to discourage deliberate overdosage.

1. Weingarten, B.; Weiss, J., and Simon, M.: A Clinical Evaluation of a New Antidiarrheal Agent, Amer. J. Gastroent. 35:628-633 (June) 1961. 2. Hock, C. W.: Relief of Diarrhea with Diphenoxylate Hydrochloride (Lomotil), J. Med. Ass. Georgia 50:485-488 (Oct.) 1961.

G. D. SEARLE & CO.

Research in the Service of Medicine



Both the Cream and Ointment rarely sensitize and are bactericidal to virtually all gram-positive and gram-negative organisms found topically, including Pseudomonas aeruginosa and Staphylococcus aureus.

Indications: Wherever infection occurs and is accessible for topical therapy.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

'NEOSPORIN'® brand
POLYMYXIN B / NEOMYCIN / GRAMICIDIN
ANTIBIOTIC CREAM

Ingredients: Each gram contains: 'Aerosporin'® brand Polymyxin B* Sulfate 10,000 Units; Neomycin Sulfate 5 mg. (equivalent to 3.5 mg. Neomycin Base); Gramicidin 0.25 mg.

In a smooth, white, water-washable vanishing cream base with a pH of approximately 5.0. Inactive ingredients: liquid petrolatum, white petrolatum, distilled water, propylene glycol, polyoxyethylene polyoxypropylene compound, emulsifying wax and 0.25% methylparaben as preservative.

*U.S. Patent Nos. 2,565,057-2,695,261

Available: In 15 Gm. tubes.

'NEOSPORIN'® brand
POLYMYXIN B / BACITRACIN / NEOMYCIN
ANTIBIOTIC OINTMENT

Ingredients: Each gram contains: 'Aerosporin'® brand Polymyxin B Sulfate 5,000 Units; Zinc Bacitracin 400 Units; Neomycin Sulfate 5 mg. (equivalent to 3.5 mg. Neomycin Base).

Available: Tubes of 1 oz., ½ oz. and ⅛ oz.

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N. Y.



Notable increase in vigor, strength and sense of well-being

STROL (stanozolol-Winthrop), a heterocyclic steroid, combines nt anabolic effects with outstanding tolerance, stimulates appe- and promotes weight gain... restores a positive metabolic balance. unteracts the catabolic effects of concomitant corticosteroid or H therapy. WINSTROL (stanozolol-Winthrop) rebuilds body tissue e it builds strength, confidence and a sense of well-being in con- ns associated with excess protein breakdown, insufficient protein e and inadequate nitrogen and mineral retention.

Effects and Precautions: Prolonged administration can produce hirsutism, acne or voice change. In an occasional patient, edema been observed and in young women the menstrual periods have milder and shorter. These side effects are reversible, and pa- s receiving prolonged treatment should be examined and ques- tioned periodically so that, should side effects appear, the dosag may be reduced or administration of the drug discontinued for a time In patients with impaired cardiac and renal function, there is the pos sibility of sodium and water retention. Liver function tests may reveal an increase in bromsulphalein retention, particularly in elderly pa tients. In such cases, therapy should be discontinued. Although it ha been used in patients with cancer of the prostate, its mild androgeni activity is considered by some investigators to be a contraindication

Dosage: Usual adult dose, 1 tablet t.i.d. before or with meals; youn women, 1 tablet b.i.d.; children (school age): up to 1 tablet t.i.d.; chi dren (pre-school age): ½ tablet b.i.d. Available as scored tablets o 2 mg. in bottles of 100. For best results, administer with a high protei diet.

WINTHROP LABORATORIES, NEW YORK 18, N. Y

arked improvement in appetite / Measurable weight gain Winthrop

Browne-McHardy Clinics

MAIN CLINIC
3636 St. Charles Ave.
New Orleans 15, La.
TWinbrook 9-2376

GRAVIER ST. DIVISION
630 Gravier St.
New Orleans 12, La.
524-1605

VETERANS HIGHWAY DIVISION
8601 Veterans Memorial Hwy.
Metairie, La.
VErnon 3-7341

INTERNAL MEDICINE
Cardiology
Endocrinology
Gastroenterology
Hematology
Rheumatology

Donovan C. Browne, M. D.
Wiley H. Jenkins, M. D.
Robert C. Judice, M. D.
John T. Leckert, M. D.
G. Gordon McHardy, M. D.
Robert J. McHardy, M. D.
Swan S. Ward, M. D.
George E. Welch, M. D.
Guy T. Williams, M. D.
Manuel Paez, M. D.

DERMATOLOGY
William Eggerton, M. D.

DISEASES OF THE CHEST
Joseph E. Blum, Jr., M. D.

EAR, NOSE and THROAT
Norma Kearby, M. D.

GENERAL SURGERY
Claude C. Craighead, M. D.
Raul G. Reyes, M. D.

OBSTETRICS and GYNECOLOGY
C. Gordon Johnson, M. D.
Robert I. Ayerst, M. D.
James M. Todd, Jr., M. D.

OPHTHALMOLOGY
Oliver H. Dabezies, M. D.

INDUSTRIAL MEDICINE
Ralph J. McDonough, M. D.

PEDIATRICS
Carl E. Kemmerly, M. D.
Milton H. Donaldson, M. D.

RADIOLOGY and RADIOTHERAPY
Charles O'Dowd Lilly, M. D.
Joseph B. Marino, M. D.
Walter McDowell, M. D.

UROLOGY
John F. Lally, M. D.

AUXILIARY SERVICES
Cytology
Diabetics
Electroencephalograph
Endoscopy
Medical Laboratory
Pharmacy
Physical Therapy
Pulmonary Function Studies

UNOPETTE DISPOSABLE BLOOD DILUTING PIPETTES

The disposable UNOPETTE Pipette makes it possible to collect blood anywhere with a minimum of equipment. It eliminates conventional rubber tubes and mouthpieces, potential reservoirs of infection for transmission of viral and microbial diseases.

UNOPETTE Pipettes eliminate, or greatly minimize the errors normally encountered in the use of conventional blood diluting pipettes.

They bring new convenience to blood collection and dilution by providing:

- Excellent capillary action.
- Automatic measurement of the volume of blood collected. Collection stops when the capillary tube reaches full capacity.
- A premeasured dilutent.
- Freedom from cleaning.

PEACOCK
SURGICAL COMPANY INC.
1235 TEXAS AVENUE
SHREVEPORT, LOUISIANA





in alcoholism: vitamins are therapy

A full "comeback" for the alcoholic is partly dependent on nutritional balance... aided by therapeutic allowances of B and C vitamins. Typically, the alcoholic patient is seriously undernourished... from long-standing dietary inadequacy, from depletion of basic reserves of water-soluble vitamins.

FOR PROFESSIONAL

RECOMMENDATION ONLY

Each capsule contains: Vitamin B_1 (Thiamine Mononitrate)...10 mg. / Vitamin B_2 (Riboflavin)...10 mg. / Niacinamide... 100 mg. / Vitamin C (Ascorbic Acid)...300 mg. / Vitamin B_6 (Pyridoxine HCl)...2 mg. / Vitamin B_{12} Crystalline... 4 mcgm. / Calcium Pantothenate...20 mg. Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100.

Lederle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.

6315-3

STRESSCAPS®

Stress Formula Vitamins Lederle



Protects your angina patient better than vasodilators alone

'Miltrate' contains both pentaerythritol tetranitrate, which dilates the patient's coronary arteries, and meprobamate, which relieves his anxiety about his condition. Thus 'Miltrate' protects your angina patient better than vasodilators alone.

Pentaerythritol tetranitrate may infrequently cause nausea and mild headache, usually transient. Slight drowsiness may occur with meprobamate and, rarely, allergic reactions. Meprobamate may increase effects of excessive alcohol. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Like all nitrate-containing drugs, 'Miltrate' should be given with caution in glaucoma.

Dosage: 1 or 2 tablets *before meals* and at bedtime. Individualization required.
Supplied: Bottles of 50 tablets.

CML-9646

Miltrate®

meprobamate 200 mg.+ pentaerythritol tetranitrate 10 mg.

WALLACE LABORATORIES / *Cranbury, N. J.*

reduce or obviate the need for transfusions and their attendant dangers

KOAGAMIN is indicated whenever capillary or venous bleeding presents a problem.

KOAGAMIN has an outstanding safety record -- in 25 years of use no report of an untoward reaction has been received; however, it should be used with care on patients with a predisposition to thrombosis.



KOAGAMIN®

parenteral hemostat

Each cc contains: 5 mg. oxalic acid, 2.5 mg. malonic acid, phenol 0.25%; sodium carbonate as buffer.

Complete data with each 10cc vial. Therapy chart on request.

CHATHAM PHARMACEUTICALS, INC.
Newark 2, New Jersey
Distributed in Canada by Austin Laboratories, Ltd. • Paris, Ontario



STARTING TOMORROW MORNING 

this capsule can help one of your overweight patients do without her favorite (fattening) foods at meals—and during all the hours in between.

Dexamyl® Spansule®
Trademark brand of sustained release capsules

Each No. 2 capsule contains 15 mg. of Dexedrine® (brand of dextro amphetamine sulfate) and 1½ gr. of amobarbital, derivative of barbituric acid [Warning, may be habit forming]. Each No. 1 capsule contains 10 mg. of Dexedrine (brand of dextro amphetamine sulfate) and 1 gr. of amobarbital [Warning, may be habit forming].

The active ingredients of the 'Spansule' capsule are so prepared that a therapeutic dose is released promptly and the remaining medication, released gradually and without interruption, sustains the effect for 10 to 12 hours.

INDICATIONS: (1) For control of appetite in overweight; (2) for mood elevation in depressive states.

USUAL DOSAGE: One 'Dexamyl' *Spansule* capsule taken in the morning.

SIDE EFFECTS: Insomnia, excitability and increased motor activity are infrequent and ordinarily mild.

CAUTIONS: Use with caution in patients hypersensitive to sympathomimetics or barbiturates and in coronary or cardiovascular disease or severe hypertension. Excessive use of the amphetamines by unstable individuals may result in a psychological dependence; in these rare instances withdrawal of medication is recommended. It is generally recognized that in pregnant patients all medications should be used cautiously, especially in the first trimester.

SUPPLIED: Bottles of 50 capsules.

Smith Kline & French Laboratories SK&F *Prescribing information Jan. 1963*



Flavor you never thought you'd get from any filter cigarette!

You'll never know how satisfying filter smoking can be until you try Tareytons. Fine, flavor-rich tobaccos go into each Tareyton. Then the famous Dual Filter brings out the best taste of these choice tobaccos. Sound too good to be true? Pick up a pack of Tareytons today and see for yourself.

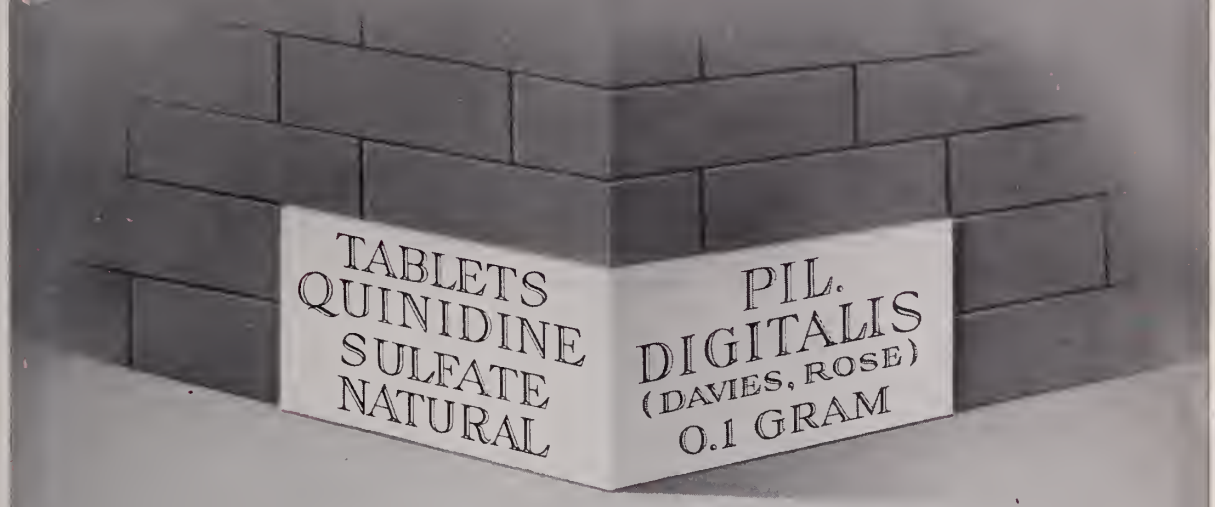


Dual Filter makes the difference

DUAL FILTER Tareyton

Product of The American Tobacco Company — "Tobacco is our middle name" A.T.Co.

A CORNERSTONE OF CARDIAC THERAPY



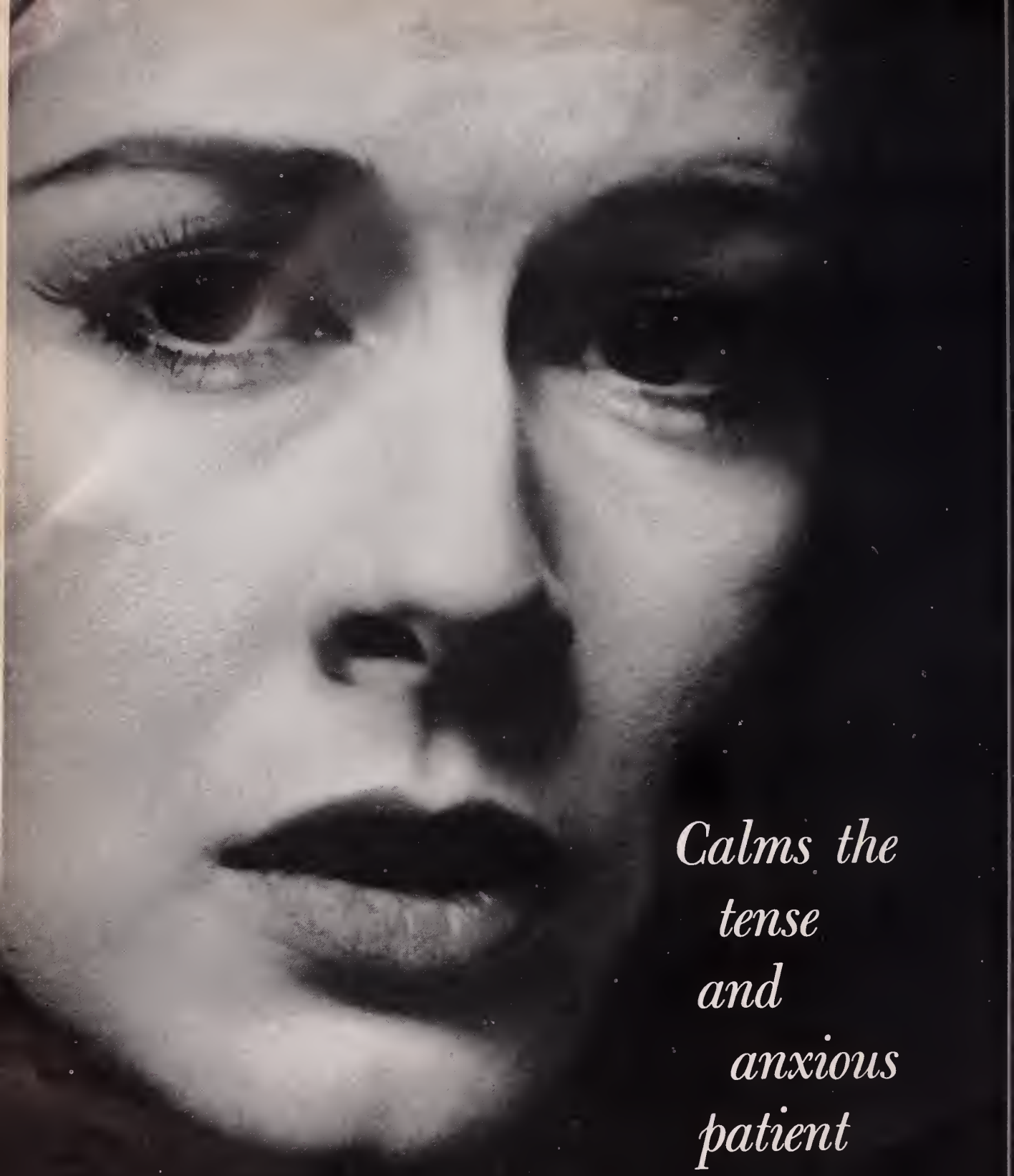
The Dictionary defines a cornerstone as something of fundamental importance, just as Pil. Digitalis, (Davies, Rose) and Tablets Quinidine Sulfate Natural (Davies, Rose) are of fundamental importance in treating your cardiac patients. These preparations represent 60 years of experience and dependability in the manufacture of pharmaceuticals.

Pil. Digitalis (Davies, Rose), 0.1 Gram (approx. 1½ grains) which comprise the entire properties of the leaf, provide a dependable and effective means of digitalizing the cardiac patient, and of maintaining the necessary saturation.

Tablets Quinidine Sulfate Natural, 0.2 Gram (approx. 3 grains) are alkaloidally assayed and standardized, insuring uniformity and therapeutic dependability. Each tablet is scored for the convenient administration of half dosages.

Davies, Rose & Company, Limited - Boston 18, Mass.

DQ-2



Calms the tense and anxious patient

'Miltown' (meprobamate) is a ***known*** and dependable drug. Its few side effects have been fully reported. ***There are no surprises in store for either the patient or the physician.*** This is why, despite the appearance of "new and different" tranquilizers, meprobamate is prescribed more than any other tranquilizer in the world.

Clinically Proven

in more than 750 published clinical studies
and over eight years of clinical use

Outstanding Record of Effectiveness and Safety

1. Relieves anxiety and anxious depression in a broad spectrum of clinical conditions.
2. Doesn't leave patients "too groggy" to work or think or learn.
3. Relaxes both mind and skeletal muscle. Relieves physical tension as well as emotional stress.

Slight drowsiness may occur with meprobamate and, rarely, allergic reactions. Meprobamate may increase effects of excessive alcohol. Use with care in patients with suicidal tendencies. Massive overdosage may produce coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Withdraw gradually after prolonged use at high dosage.

Usual dosage: 1 or 2 400 mg. tablets t.i.d.

Supplied: 400 mg. scored tablets, 200 mg. sugar-coated tablets; bottles of 50.

the original meprobamate

Miltown®

WALLACE LABORATORIES / *Cranbury, N. J.*

CH-9239







all things considered...the decision is for

in otitis media, having weighed the classi
cal considerations basic to management, physician
often choose DECLOMYCIN demethylchlortetra
cycline for broad-spectrum antibiotic therapy
DECLOMYCIN demethylchlortetracycline produce
activity levels higher than do other tetracyclines..
at lower dosage...and maintains them withou
significant fluctuation.

Activity is prolonged 24 to 48 hours after the last









DECLOMYCIN®

DEMETHYLCHLORTETRACYCLINE *syrup*

dose, thus helps protect against relapse—an "extra dimension" in broad-spectrum control.

Effective in a wide range of everyday infections—respiratory, urinary tract and others—in the young and aged—the acutely or chronically ill—when the offending organisms are tetracycline-sensitive. *Side Effects* typical of tetracyclines which may occur: glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis, dermatitis, overgrowth of nonsusceptible organisms. Also: photodynamic reaction (making avoidance of direct sunlight advisable) and, very rarely, anaphylactoid reaction.

Syrup, 75 mg. demethylchlortetracycline/5 cc. and *Pediatric Drops*, 60 mg./cc.

Average Daily Dosage—Infants and Children: 3 to 6 mg. per lb. body weight, in 2 or 4 doses.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

6568-3

WILLIAM B. TERHUNE, M. D.

THE SILVER HILL FOUNDATION

New Canaan Connecticut

ANNOUNCES:

Appointment available for Senior Associate. Board Certified in Psychiatry to join our Group in the active practice of psychiatry. The Silver Hill Foundation is a psychotherapeutic unit for the treatment of the functional nervous disorders. The setting is that of a comfortable country home where a limited number of patients are under intensive, re-educational treatment for a period of several weeks.

Ideal work conditions, scientific freedom and guaranteed income. Only well qualified physician, capable of advancement should APPLY TO: Dr. William B. Terhune, Medical Director, New Canaan, Connecticut.

Associates: Dr. Marvin G. Pearce, Dr. Robert B. Hiden, Dr. William M. White, Dr. William D. Wheat, Dr. Warren A. Mann, Dr. Morgan F. Moore

At home or traveling . . .
effective management of
• AMEBIC DYSENTERY
• SIMPLE DIARRHEA

YODOXIN®
DIIODOHYDROXYQUIN U.S.P.



. . . THE DRUG OF CHOICE IN AMEBIC DYSENTERY
. . . FOUND EFFECTIVE IN THE MANAGEMENT OF NONSPECIFIC DIARRHEA
. . . LOW TOXICITY OF THIS DRUG COMPARED TO OTHER AMEBACIDES GIVES OUTSTANDING ADVANTAGES IN THESE ENTITIES

SUGGESTED DOSAGE:

AMEBIC DYSENTERY: Adults take 3 tablets t.i.d. after meals. This is continued for 20 days.

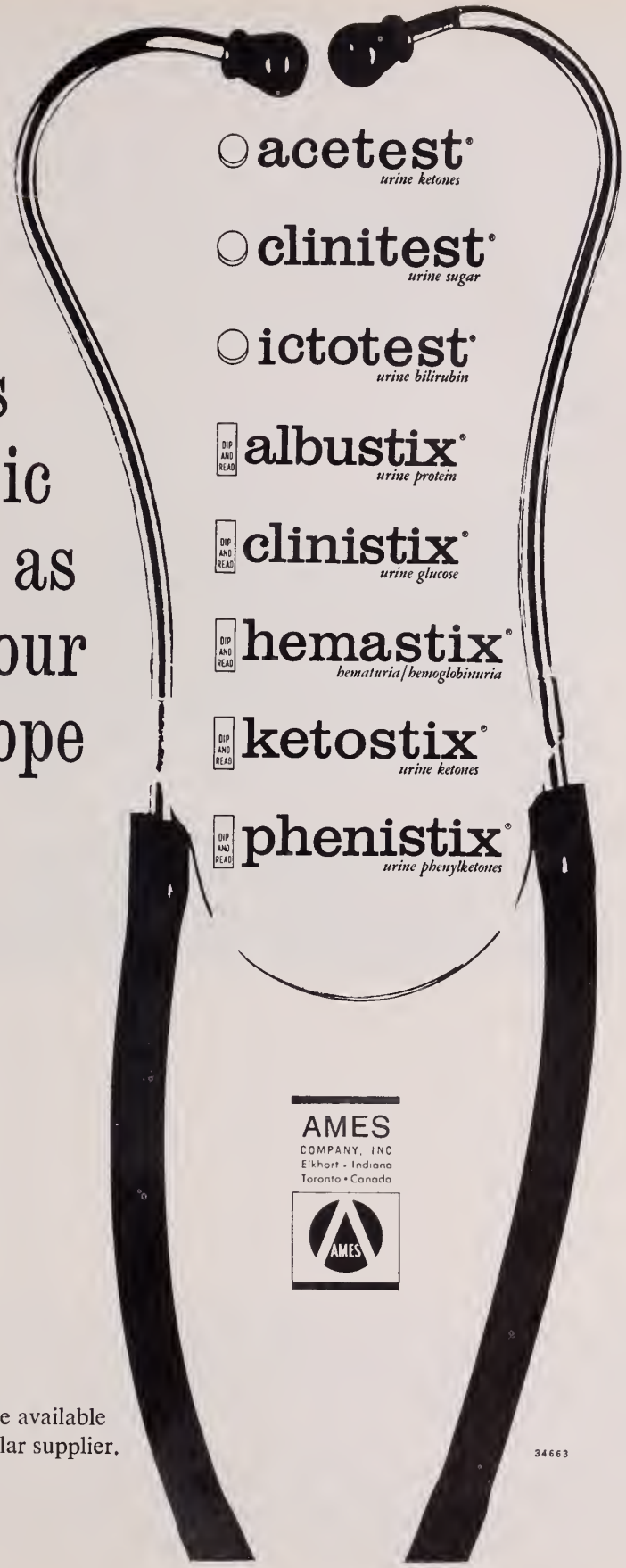
NONSPECIFIC ENTERITIS AND SIMPLE DIARRHEA: At first discomfort one tablet, another tablet two hours later. Repeat next day if diarrhea persists.

Chills, fever, rash, erythema and in rare cases furunculosis have been reported. Iodine containing compounds are contraindicated in patients with liver damage or known drug sensitivity.

For adequate use data please request and consult our product literature

GLENWOOD LABORATORIES, Inc., TENAFLY, N. J.

urine tests as basic as your stethoscope



- acetest® *urine ketones*
- clinitest® *urine sugar*
- ictotest® *urine bilirubin*
- DIP AND READ albustix® *urine protein*
- DIP AND READ clinistix® *urine glucose*
- DIP AND READ hemastix® *hematuria/hemoglobinuria*
- DIP AND READ ketostix® *urine ketones*
- DIP AND READ phenistix® *urine phenylketones*

AMES
COMPANY, INC
Elkhart • Indiana
Toronto • Canada

AMES products are available through your regular supplier.

34663

HISTA-VADRIN

when antihistamines alone are not enough



HISTA-VADRIN, an upper respiratory decongestant, is designed for the oral relief of congestion and edema of the upper respiratory passages. The ANTIHISTAMINIC drugs methapyriline and chlor-pheniramine are noted for their ability to prevent vasodilatation and inflammatory edema caused by the release of histamine.

VASOCONSTRICTORS, phenylpropanolamine and phenylephrine oppose mucosal edema by constricting blood vessels which have been dilated by histamine and other factors involved in inflammation. These vasoconstrictors are not as likely to cause excitement or wakefulness as ephedrine or methamphetamine (1).

Indications: For the relief of hay fever, vasomotor rhinitis, and symptoms resulting from upper respiratory infections. Hista-vadrin can afford relief also in other allergic conditions such as urticaria and angioedema.

Each scored Hista-vadrin tablet contains:

Phenylpropanolamine Hydrochloride	40 mg.
Chlor-Pheniramine Maleate	4 mg.
Methapyriline Hydrochloride	40 mg.
Phenylephrine Hydrochloride	5 mg.

Dosage: Adult Dose, 1 tablet every six hours or in accordance with therapeutic response.

Supplied: Slow release scored tablets designed to disintegrate in 2 to 3 hours.

Reference available on request.

Samples and professional literature on request.

HISTA-VADRIN is another "established need" product

First Texas *Pharmaceuticals, Inc.*

DALLAS • ATLANTA • SINCE 1901



HOW TO BE SURE
your young patients get the aspirin dosage you want them to have

The answer is Orange Flavored Bayer Aspirin for Children

The dosage is 1¼ grains per tablet. Mothers place such confidence in the Bayer name. And the new orange flavor is so fresh and smooth that children take it readily. (The grip-tight cap on the bottle helps keep them from taking it on their own.)

For professional samples, just write The Bayer Company, De pt. 112, 1450 Broadway, New York 18, New York.





Help protect the kidneys and other threatened organs

When treatment of hypertension is effective the danger of damage to the renal system is reduced.[1-2] "Hypertensive patients suffer from vascular deterioration roughly proportional to the severity of the hypertension... Reduction of blood pressure to normotensive levels reduces or arrests the progress of vascular damage with a resultant decrease in morbidity and mortality."[1] *Because Rautrax-N lowers blood pressure so effectively, it will help provide this important protection not only for the kidneys but also for the heart and brain of your hypertensive patients.* Rautrax-N is effective in mild,[3] moderate,[3,4] or severe hypertension.[4,5]

Dosage: Initially, 1 to 4 tablets daily preferably at mealtime. For maintenance, 1 or 2 tablets daily.

Side effects and precautions: Rauwolfia preparations may cause reversible extrapyramidal symptoms and emotional depression. Caution indicated in use with depression, suicidal tendencies, peptic ulcer. Minor side effects: diarrhea, weight gain, nausea, drowsiness. Bendroflumethiazide may cause reversible hyperuricemia and/or gout, unmask latent diabetes, increase glycosuria in diabetics. Caution indicated in use for patients on digitalis, with severely damaged kidneys, renal insufficiency, increasing azotemia, cirrhosis. Contraindicated in complete renal shutdown. Minor side effects: leg or abdominal cramps, pruritis, paresthesias, mild rashes.

Supply: Rautrax-N—capsule-shaped tablets providing 50 mg. Raudixin® [Rauwolfia serpentina whole root], 4 mg. Naturetin® [bendroflumethiazide], and 400 mg. potassium chloride. *Rautrax-N Modified*—50 mg. Raudixin [Rauwolfia serpentina whole root], 2 mg. Naturetin [bendroflumethiazide], and 400 mg. potassium chloride, in capsule-shaped tablets. For full information, see your Squibb Product Reference or Product Brief.

References: (1) Moyer, J. H., and Heider, C.: Am. J. Cardiol. *9*:920 (June) 1962. (2) Brest, A. N., and Moyer, J. H.: Pennsylvania M. J. *63*:545 (Apr.) 1960. (3) Berry, R. L., and Bray, H. P.: J. Am. Geriatrics Soc. *10*:516 (June) 1962. (4) Hutchison, J. C.: Current Therap. Res. *4*:610 (Dec.) 1962. (5) Feldman, L. H.: North Carolina M. J.: *23*:248 (June) 1962.

SQUIBB
Squibb Quality
—the Priceless Ingredient
SQUIBB DIVISION Olin

RAUTRAX®-N RAUWOLFIA SERPENTINA WHOLE ROOT (50 MG.), BENDROFLUMETHIAZIDE (4 MG.) WITH POTASSIUM CHLORIDE (400 MG.), SQUIBB



In Sprains, Strains and Muscle Spasm, 'Soma' Compound

numbs the pain...not the patient

A potent analgesic and
a superior muscle relaxant

1. A sprain or fracture is not a big clinical problem—but it does hurt. And if there is housework to do and kids to mind, the patient needs something to numb the pain.

2. A.P.C. compounds have limited usefulness; and the patient can buy them without your prescription. Unfortunately, most of them are too mild to be effective for sprains—and more potent products too often make the patient feel 'dopey'.

3. 'Soma' Compound is ideal in these cases. Since it contains both 'Soma' (carisoprodol) and acetophenetidin it is both a potent analgesic and a superior muscle relaxant; it also contains caffeine to offset any drowsiness *("numbs the pain...not the patient").*

4. Why not try 'Soma' Compound? Dosage is 1 or 2 tablets q.i.d. For more severe pain, try 'Soma' Compound + Codeine. Dosage: 1 or 2 tablets q.i.d.

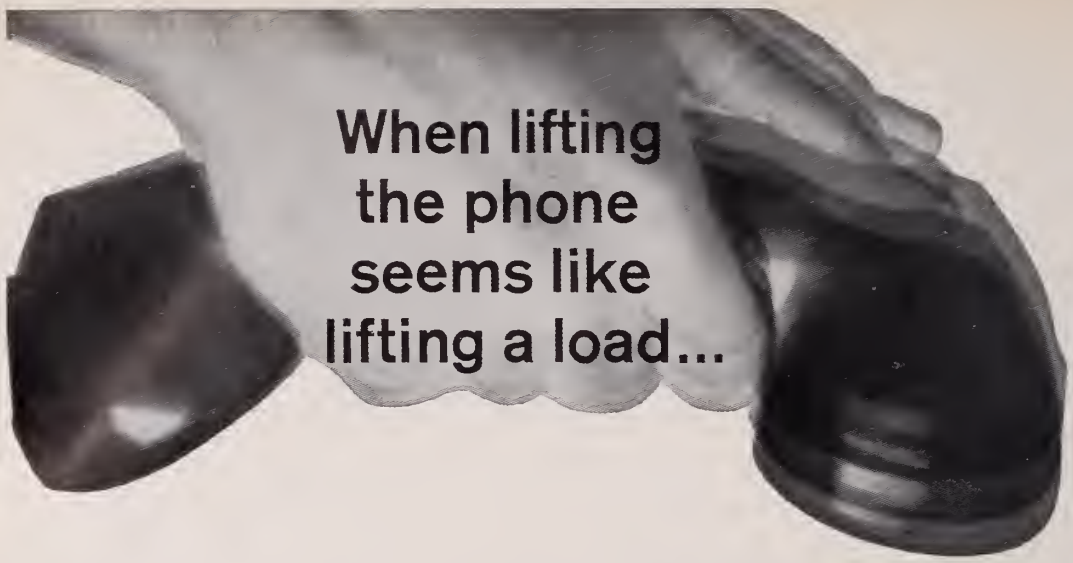
5. Hypersensitivity to carisoprodol may occur rarely. Codeine may produce addiction, nausea, vomiting, constipation or miosis.

Soma® Compound
carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg.

Soma® Compound + Codeine
carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg., codeine phosphate 16 mg. (Warning—may be habit forming.)

®WALLACE LABORATORIES / *Cranbury, N.J.*

CSO-9193



in chronic bronchitis and emphysema

ISUPREL® BRAND OF ISOPROTERENOL hydrochloride hydrochloride

MISTOMETER® Q.I.D.

ISUPREL (isoproterenol/Winthrop) "...can increase breathing efficiency in pulmonary emphysema."[1] The patient with chronic obstructive pulmonary disease "...should use the bronchodilator four times daily whether or not he experiences episodes of bronchospasm."[2]

Use of the Mistometer eases breathing by relaxing bronchospasm, and aiding productive cough. "Of the aerosol bronchodilators, ISUPREL (isoproterenol/Winthrop) seems to be the best...."[3] Conscientious use q.i.d. improves vital capacity and exercise tolerance.

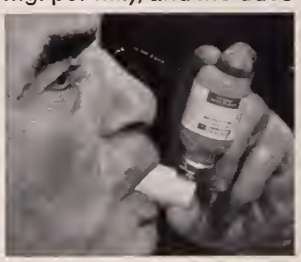
The Mistometer brings new efficacy and convenience—enables patients to maintain treatment wherever they are.

With use of ISUPREL (isoproterenol/Winthrop), occasionally tachycardia, palpitation, nervousness, nausea and vomiting or headache may occur, especially with excessive dosage. Adjust dosage carefully in patients with hyperthyroidism, acute coronary disease, cardiac asthma or limited cardiac reserve, and in persons sensitive to sympathomimetic amines.

Caution: Epinephrine should not be administered with ISUPREL (isoproterenol/Winthrop) as both drugs are direct cardiac stimulants and their combined effects may induce serious arrhythmia. If desired they may, however, be alternated, provided an interval of at least four hours has elapsed.

Dosage: Two inhalations at least one minute apart four times daily, regularly. Inhalations may be taken more often if indicated.

Available as ISUPREL HCl (isoproterenol HCl/Winthrop) Mistometer—single unit combining plastic nebulizer and ISUPREL (isoproterenol/Winthrop) solution 1:400—or 0.25 per cent w/w (=2.8 mg. per ml.), and includes alcohol, 33 per cent; bottles of 15 ml.

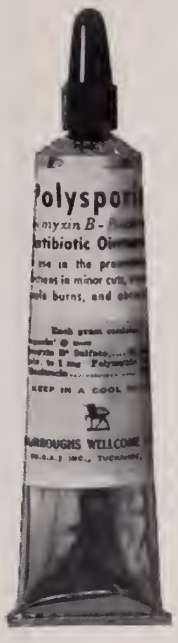


1. Reeves, J. E.: *M. Times* 90:512, May, 1962. 2. Williams, M. H., Jr.: *M. Sc.* 11: 433, March 19, 1962. 3. Peckenschneider, L. E.: *J. Kansas M. Soc.* 56:486, Sept., 1955.

Winthrop Laboratories, New York 18, N.Y.

Winthrop

in treating topical infections, no need to sensitize the patient



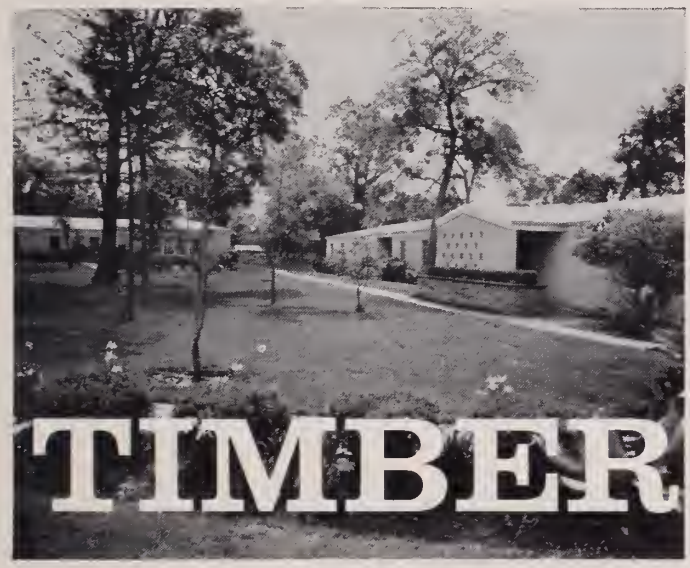
USE 'POLYSPORIN'® brand POLYMYXIN B-BACITRACIN ANTIBIOTIC OINTMENT

broad-spectrum antibiotic therapy with minimum risk of sensitization

Caution: As with other antibiotic products, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **Supplied:** in ½ oz. and 1 oz. tubes.

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.



PSYCHIATRIC HOSPITAL

DAY HOSPITAL

DEPARTMENT OF OUT PATIENT PSYCHIATRY

TIMBERLAWN FOUNDATION
For Education and Research in Psychiatry

Narcotic Cases Not Admitted

TIMBERLAWN
PSYCHIATRIC CENTER

PERRY C. TALKINGTON, M.D.
Psychiatrist In Chief

CHARLES L. BLOSS, M.D.
Medical Director

HOWARD M. BURKETT, M.D.
Clinical Director

DONALD BERTOCH, M.A.
DAVID LIPSHER, Ph.D.
JEAN HUBBARD, B.S.
Clinical Psychology

Associate Psychiatrists
JAMES K. PEDEN, M.D.
WARD G. DIXON, M.D.
JERRY M. LEWIS, M.D.
CLAUDE L. JACKSON, M.D.
E. CLAY GRIFFITH, M.D.
BELVIN A. SIMMONS, M.D.
ALBERT F. RIEDEL, M.D.
JOHN HENRY REITMAN, M.D.

Business Manager
RALPH M. BARNETTE, JR., B.B.A.

BILL M. TURNAGE, M.S.S.W.
ROBERT L. COATES, M.S.S.W.
WELDON EBELING, M.S.S.W.
Social Work

GERALDINE SKINNER, B.S., O.T.R.
Director of Occupational Therapy

LOIS TIMMINS, Ed.D.
Director of Recreational Therapy

FRANCES LUMPKIN, R.N., B.S.
Director of Nurses

EVergreen 1-2121 — Dallas 21, Texas — P. O. Box 1769

One out of three *who died of cancer last year* ***could have been saved!***



To alert the practicing physician to suspect and diagnose cancer early—the American Cancer Society has available for you a film series of Physicians' Conferences on Cancer.

*Kinescopes of live, color, closed-circuit television programs, on early diagnosis and treatment of cancer, present outstanding clinicians.

These 24 film programs—the nucleus of a course on cancer for the General Practitioner—cover virtually all cancer sites and types. They center around panel discussions, laboratory techniques, case histories, x-ray findings, histopathology, statistical data, and operative procedures.

Professional Films and services available to the doctor in his own community may be obtained through your Division of the

American Cancer Society

* APPROVED BY THE AMERICAN ACADEMY OF GENERAL PRACTICE FOR INFORMAL STUDY CREDIT (16 MM COLOR SOUND FILMS. RUNNING TIME 30-50 MINUTES)

AMERICAN CANCER SOCIETY, Louisiana Division, Inc., 822 Perdido Street, New Orleans 12, La.

INDEX TO ADVERTISERS

American Tobacco Company 24
Ames Company, Inc. 31

Browne-McHardy Clinics 20
Burroughs Wellcome & Co. 18, 37

Chatham Pharmaceuticals, Inc. 22

Davies, Rose & Co., Ltd. 25

Endo Laboratories 11

First Texas Pharmaceuticals, Inc. 32

Glenbrook Laboratories 10, 33
Glenwood Laboratories, Inc. 30

Katz & Besthoff, Ltd. 1
Lederle Laboratories 12, 13, 21, 28, 29
Lilly & Company, Eli Front Cover, 16
Louisiana Coca-Cola Bottling Co. 1
Louisiana State Board of Health Second & Third Covers
Lov-é Brassiere Company 8

Majors Company, J. A. 1

Parke, Davis & Company 4, 5
Peacock Surgical Co., Inc. 20
Professional Cards 39, 40

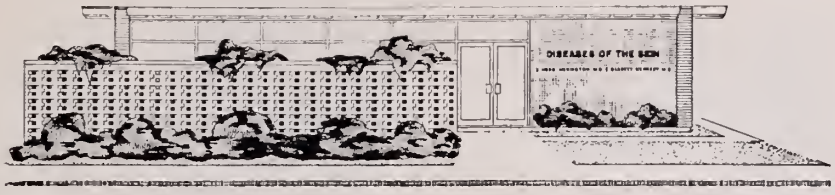
Robins Co., Inc., A. H. 3
Roche Laboratories Back Cover
Rorer, Inc., William H. 15

Searle & Company, G. D. 17
Silver Hill Foundation, The 30
Smith Kline & French Laboratories 23
Squibb & Sons, E. R. 34

Timberlawn Psychiatric Center 37

Wallace Laboratories 6, 7, 14, 22, 26, 27, 35
Winthrop Laboratories 2, 9, 19, 36

PROFESSIONAL CARDS



Courtesy Parking

Adjacent to Building

BARRETT KENNEDY, M. D.

V. MEDD HENINGTON, M. D.

WM. J. PERRET, M. D.
(Associate)

DERMATOLOGY

4522 MAGNOLIA STREET

TWinbrook 1-4452 — 1-4453

Green Clinic

709 South Vienna Street — Ruston, Louisiana

Surgery
Marvin T. Green, M.D.
LaMoyne C. Bleich, M.D.

Obstetrics and Gynecology
Carl L. Langford, M.D.
David M. Hall, M.D.

Pediatrics
Bruce W. Everist, M.D.
O. Wharton Brown, Jr., M.D.

Eye, Ear, Nose and Throat
Harold H. Harms, M.D.

Radiology
M. Ragan Green, M. D.

Internal Medicine
Henry S. Roane, M.D.
Robert W. Sharp, M.D.
Joe L. Smith, Jr., M.D.

Dentistry
L. Felton Green, D.D.S.
Benjamin C. Baugh, D.D.

The Baton Rouge Clinic

134 North 19th St. — DI 8-5361

SURGERY
J. Sabatier, M. D.
Charles Mosely, M. D.
Charles S. Peter, Jr., M. D.

GYNECOLOGY & OBSTETRICS
Melvin Schudmak, M. D.
J. P. Griffon, M. D.
Donald C. Diefendorf, M. D.

UROLOGY
Mortimer Silvey, M. D.

GENERAL PRACTICE
Shirley J. Woodford, M. D.

INTERNAL MEDICINE
Charles Prosser, M. D.
Roger Reynolds, M. D.
(Allergy)
Bruce L. Baer, M. D.
(Gastroenterology)
Douglas Gordon, M. D.
(Endocrinology)
David D. Kahn, M. D.
(Hematology)

EYE
George H. Jones, M. D.

PHILIP RONALD LORIA, M. D.

DISEASES OF THE SKIN

Dermoplaning — **Removal of Excessive Hair**

1104 Maison Blanche Bldg. — New Orleans 16, La.
By Appointment — 524-9621

PROFESSIONAL CARDS

JOHN C. HARDIN, JR.
D.D.S., M.D., F.A.C.S.
Maxillo-Facial & Oral Surgery
(Head and Neck Surgery)
121 Physicians & Surgeons Bldg., West
Phone 3-6901 Shreveport, Louisiana

BLAISE SALATICH, D.D.S., M.D.
PRACTICE LIMITED TO ORTHOPEDIC SURGERY
1212 Maison Blanche Building
JAckson 2-7697 By Appointment

DR. NATHAN H. POLMER
Physical Medicine—Rehabilitation
2209 Carondelet St.
2 - 5 P. M.
Off.: JA 2-0171 Res.: JA 2-3946

JAMES W. BURKS, JR., M. D.
DISEASES OF THE SKIN
SURGICAL PLANING FOR COSMETIC DEFECTS
FACILITIES FOR REMOVAL OF SUPERFLUOUS HAIR
925 Maison Blanche Bldg.
New Orleans 16, La. 529-3322

DR. R. ROSS, JR.
SKIN DISEASES
802 Pere Marquette Bldg. JA 2-0202

DR. RICHARD W. VINCENT
PLASTIC AND RECONSTRUCTIVE SURGERY
34 Maes Court — Medical Plaza
3600 PRYTANIA STREET
TWinbrook 5-4561

JUSTILLIEN H. FORET, M. D.
Practice Limited to Psychiatry
3706 Prytania Street
899-2618 By Appointment

CHARLES I. BLACK, M. D.
DISEASES OF THE SKIN
4550 North Boulevard Dlckens 3-2841
Baton Rouge, Louisiana

Business Management Consultants
for Individual Practices, Groups and Clinics
PROFESSIONAL MANAGEMENT SERVICE
700 Maison Blanche Bldg.
524-1177 New Orleans 16, La.

HUGH MANY, M. D.
DISEASES OF THE SKIN
4900 St. Charles Avenue 895-6700
and
Nicholson-Baehr Clinic, Marrero, La.
By Appointment 341-1300

THE OWENS CLINIC
for
PLASTIC AND RECONSTRUCTIVE SURGERY
2223 Carondelet St. New Orleans 13, La.
Telephone: JAckson 2-0106
After Hours — Call Doctors' Exchange WH 5-4141

DR. HARTWIG M. ADLER
EYE, EAR, NOSE AND THROAT
Hours by appointment.
3439 Prytania Street TW. 1-4094
New Orleans

DR. CARL N. WAHL
Practice limited to
MAXILLO-FACIAL AND PLASTIC SURGERY
4500 Magnolia Street 891-6615

FRANK H. MAREK, M. D.
Radiologist
444 So. Ryan Street Lake Charles, La.
Phone HE 3-6361
Practice Limited to
X-ray and Radium Treatment and Diagnosis

DR. HARRY ZOLLER
HEARING AND DEAFNESS
DISEASES AND SURGERY OF THE EAR
1109 Pere Marquette Building
JA. 5-2535 By Appointment

JOHN H. COUNCE, M. D.
Diseases of the Skin
1413 Delachaise St. New Orleans
Office Hours
By Appointment TW 1-2813

FREDERIC W. BREWER, M. D.
PRACTICE LIMITED TO PSYCHIATRY
1008 Maison Blanche Building
JA 5-4047 By Appointment

The Cancer Commission of the Louisiana State Medical Society



BREAST CANCER will strike one of every twenty women in the United States. At present rates, less than half of them will be cured.

Breast cancer is a disease of immense frustration for the physician... and is one of woman's deepest fears. Yet, for the individual patient, there *is* hope. Five-year cures result in 82% of *localized* cases.

Monthly breast self-examination and annual health checkups are essential in uncovering such cases. Essential, too, is person-to-person exchange between doctor and patient, to give women a chance to resolve their anxieties about this disease... anxieties which paralyze judgment and delay life-saving action.

The Society's newest film, "Breast Self-Examination," has been highly praised by physicians and laymen. A physician is present at each showing so that women may ask questions and be influenced to see their own doctors promptly about any breast problem.

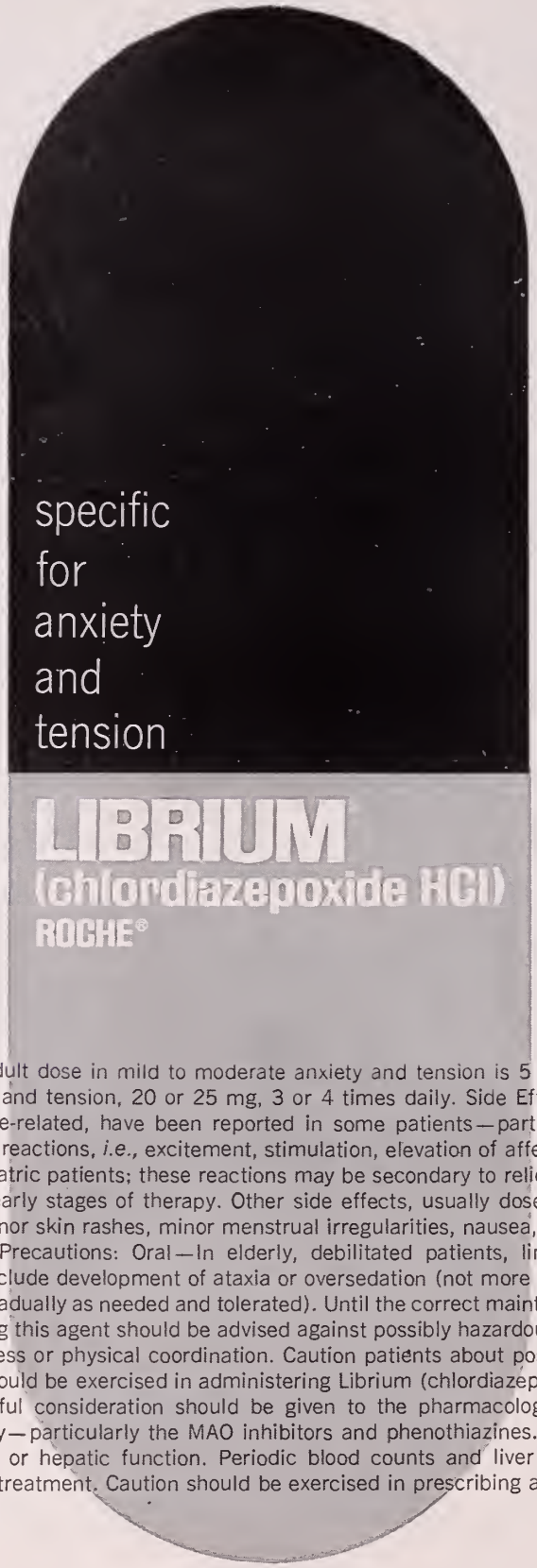
The Society is working intensively on the breast cancer problem, through research and education. Through our concerted efforts... yours, doctor, and ours... we *will* prevail against this great enemy.

AMERICAN CANCER SOCIETY®

LOUISIANA DIVISION, INC.
204 Delta Building New Orleans 12, La.

Louisiana State Board of Health

ROCHE



Dosage: Oral—Usual adult dose in mild to moderate anxiety and tension is 5 or 10 mg, 3 or 4 times daily; in severe anxiety and tension, 20 or 25 mg, 3 or 4 times daily. Side Effects: Oral—Drowsiness and ataxia, usually dose-related, have been reported in some patients—particularly the elderly and debilitated. Paradoxical reactions, *i.e.,* excitement, stimulation, elevation of affect and acute rage, have been reported in psychiatric patients; these reactions may be secondary to relief of anxiety and should be watched for in the early stages of therapy. Other side effects, usually dose-related, have included isolated instances of minor skin rashes, minor menstrual irregularities, nausea, constipation, increased and decreased libido. Precautions: Oral—In elderly, debilitated patients, limit dosage to smallest effective amount to preclude development of ataxia or oversedation (not more than 10 mg per day initially, to be increased gradually as needed and tolerated). Until the correct maintenance dosage is established, patients receiving this agent should be advised against possibly hazardous procedures requiring complete mental alertness or physical coordination. Caution patients about possible combined effects with alcohol. Caution should be exercised in administering Librium (chlordiazepoxide HCl) to addiction-prone individuals. Careful consideration should be given to the pharmacology of any agents to be employed concomitantly—particularly the MAO inhibitors and phenothiazines. Observe usual precautions in impaired renal or hepatic function. Periodic blood counts and liver function tests may be advisable in protracted treatment. Caution should be exercised in prescribing any therapeutic agent to pregnant patients.

JOURNAL of the LOUISIANA STATE MEDICAL SOCIETY

LOUISIANA STATE MEDICAL SOCIETY

Formerly NEW ORLEANS MEDICAL and SURGICAL JOURNAL
OFFICIAL ORGAN OF THE LOUISIANA STATE MEDICAL SOCIETY

OCTOBER, 1963

Copyright 1963 by
Louisiana State Medical Society.
$4.00 per annum, 35¢ per copy

Vol. 115, No. 10

Published monthly by
The Journal of the Louisiana State
Medical Society, Inc.
1430 Tulane Ave., New Orleans 12

Contents

Pediatric Nasal Surgery 329
Ralph H. Riggs, M. D., Shreveport

What Physicians Should Know About Nasal Plastic Surgery 337
Jack R. Anderson, M. D., New Orleans

Relaxed Management of the Ambulatory Diabetic 342
A. A. Herold, Jr., M. D., Shreveport

The Case For the Conservative Control of the Ambulatory Diabetic 346
Van B. Saye, Jr., M. D., Baton Rouge



Giardial Duodenitis: Clinical Manifestations of Giardiasis in Children (Report of Three Cases) 350
Lloyd A. McLaughlin, Jr., M. D., New Orleans

Editorial 355

Organization Section 358

Medical News Section 359

Book Reviews 364

Index to Advertisers 40

The Lente Insulins

• wide range of Insulin activity
• free of modifying protein

Additional information available upon request.
Eli Lilly and Company, Indianapolis 6, Indiana.

Lilly

300026

OCT 30 1963
LIBRARY

Second Class Mail Privileges Authorized at New Orleans, Louisiana

ARE WE VULNERABLE TO AN INVADER?

Several years ago an ill Mexican boarded a Greyhound Bus south of the border and traveled across the entire country, eventually ending up in a New York hospital where his illness was diagnosed as smallpox. Near panic followed and several million doses of smallpox vaccine were administered in a mad rush. More recently, the son of a foreign missionary passed through Idlewild Airport, New York, while enroute to Canada, where his febrile illness was diagnosed as smallpox. In London a traveler from Pakistan was ill on arrival, was hospitalized and diagnosed as smallpox. Here many secondary, tertiary, etc., cases developed, with a high (40%) fatality rate.

The major cities of Louisiana are served by airlines which also participate in international travel. There is always the possibility that a traveler from a smallpox endemic area might be set down within our midst while incubating the disease. If this were to occur, fear and apprehension could be held to a minimum if the majority of our population were protected by recent smallpox vaccination. Are your patients properly protected?

It should be pointed out that in the recent London outbreak at least two physicians and a nurse (all unvaccinated), who cared for victims of smallpox, contracted the disease and died. When were *YOU* last vaccinated, Doctor?

Louisiana State Board of Health

JAMES R. STRAIN, M. D., M. P. H.

President



BOTTLED UNDER AUTHORITY OF THE COCA-COLA COMPANY BY
THE LOUISIANA COCA-COLA BOTTLING CO., LTD.



You Know--

that we know!

TRUSTED MANY MILLIONS OF TIMES

GOOD DRUG STORES ONLY THE BEST
Katz & Besthoff, Inc.

Prescription Headquarters Since 1905

AMERICAN COLLEGE OF
CARDIOLOGY

"THE MARDI GRAS CONVENTION"

(Thirteenth Annual Convention)

February 12-16, 1964

Roosevelt Hotel, New Orleans, Louisiana

MEDICAL BOOKS
Of All Publishers
Any book on Medicine, Surgery, and Nursing

J. A. MAJORS COMPANY

147 South Liberty St.

NEW ORLEANS 12, LA.

——Catalogs cheerfully sent upon request——





For dramatic restoration

WINSTROL®

brand of STANOZOLOL

Oral anabolic therapy with this new physiotonic helps restore the patient's: positive protein metabolism; confidence, alertness and sense of well-being.

WINSTROL (stanozolol/Winthrop), a heterocyclic steroid, combines highest potency* with outstanding tolerance, stimulates appetite and promotes weight gain... restores a positive metabolic balance. It counteracts the catabolic effects of concomitant corticosteroid or ACTH therapy. WINSTROL (stanozolol/Winthrop) rebuilds body tissue while it builds strength, confidence and a sense of well-being in conditions associated with excess protein breakdown, insufficient protein intake and inadequate nitrogen and mineral retention.

Side Effects and Precautions: Prolonged administration can produce mild hirsutism, acne or voice change. In an occasional patient, edema has been observed and in young women the menstrual periods have been milder and shorter. These side effects are reversible, and patients receiving prolonged treatment should be examined and questioned periodically so that, should side effects appear, the dosage may be reduced or administration of the drug discontinued for a time.

In patients with impaired cardiac and renal function, there is the possibility of sodium and water retention. Liver function tests may reveal an increase in bromsulphalein retention, particularly in elderly patients. In such cases, therapy should be discontinued. Although it has been used in patients with cancer of the prostate, its mild androgenic activity is considered by some investigators to be a contraindication.

Dosage: Usual adult dose, 1 tablet t.i.d. before or with meals; young women, 1 tablet b.i.d.; children (school age): up to 1 tablet t.i.d.; children (preschool age): ½ tablet b.i.d. Available as scored tablets of 2 mg. in bottles of 100. For best results, administer with a high protein diet.

*ANIMAL DATA

Rx WINSTROL
(stanozolol/Winthrop) whenever anabolic therapy is indicated

Winthrop

Winthrop Laboratories, New York 18, New York



...nothing, that is, except the sedative-antispasmodic action of

*This one in the High Sierras, California

Donnatal®

Robins

In each Tablet, Capsule or 5 cc. Elixir		In each Extentab
0.1037 mg.	hyoscyamine sulfate	0.3111 mg.
0.0194 mg.	atropine sulfate	0.0582 mg.
0.0065 mg.	hyoscine hydrobromide	0.0195 mg.
16.2 mg. (¼ gr.)	phenobarbital (¾ gr.)	48.6 mg.

(Warning: May be habit forming)

No serious toxic reactions are to be anticipated. Dryness of the mouth, blurred vision, difficult urination, and flushing and dryness of the skin may occur with excessive and prolonged dosage, but promptly disappear with reduction in dosage. Contraindicated in acute glaucoma, advanced hepatic or renal disease, or idiosyncrasy to any component. Use with care in incipient glaucoma or urinary bladder neck obstruction.

A. H. ROBINS CO., INC., Richmond 20, Virginia

Prescribed by more physicians than any other antispasmodic—*well over 5 billion doses!*


when pain & spasm

call for analgesic-relaxant action···

Whether spasm is induced by pain, or pain by spasm, satisfactory control usually requires analgesic as well as relaxant action. In such cases, ROBAXISAL combats both pain and spasm. When apprehension is a complicating factor, ROBAXISAL-PH is indicated.

Among the many conditions for which ROBAXISAL and ROBAXISAL-PH have been found effective are: strains and sprains, painful disorders of the back, "whiplash" injury, myositis, pain and spasm associated with arthritis, low back pain, torticollis, and headache associated with muscular tension.

Side effects such as lightheadedness, slight drowsiness, dizziness and nausea may infrequently occur but usually disappear on reduction of dosage. There are no specific contraindications other than hypersensitivity to any one of the components.

*Skeletal muscle spasm is a two-headed dragon of 'PAIN & SPASM'



ROBAXISAL®

Each pink-and-white laminated Tablet contains:

ROBAXIN (methocarbamol, Robins)	400 mg.
U.S. Pat. No. 2770649	
Aspirin (5 gr.)	325 mg.

ROBAXISAL®-PH

Each green-and-white laminated Tablet contains:

ROBAXIN (methocarbamol, Robins)	400 mg.	Hyoscyamine sulfate	0.016 mg.
Phenacetin	97 mg.	Phenobarbital (1/8 gr.)	8.1 mg.
Aspirin	81 mg.	(Warning: May be habit forming)	

Robins **A. H. ROBINS CO., INC., Richmond 20, Virginia**

Helps the epileptic to realize his potential

DILANTIN®

(DIPHENYLHYDANTOIN SODIUM)

PARKE-DAVIS



"The most effective form of emotional approach remains the demonstration to the patient that the seizure phenomena can be adequately controlled with anticonvulsant medication."[1]

At present, diphenylhydantoin sodium is generally regarded as the standard in anticonvulsant medication because of its effectiveness in controlling grand mal and psychomotor seizures.[2-10] It possesses a wide margin of safety, and incidence of side effects is minimal.[4] With this agent, oversedation is not a problem.[3] Moreover, its use is often accompanied by improvement in the patient's memory, intellectual performance, and emotional stability.[11]

Indications: Grand mal epilepsy and certain other convulsive states.

Precautions: Toxic effects are infrequent: allergic phenomena such as polyarthropathy, fever, skin eruptions, and acute generalized morbilliform eruptions with or without fever. Rarely, dermatitis goes on to exfoliation with hepatitis, and further dosage is contraindicated. Eruptions then usually subside. Though mild and rarely an indication for stopping dosage, gingival hypertrophy, hirsutism, and excessive motor activity are occasionally encountered, especially in children, adolescents, and young adults. During initial treatment, minor side effects may include gastric distress, nausea, weight loss, transient nervousness, sleeplessness, and a feeling of unsteadiness. All usually subside with continued use. Megaloblastic anemia has been reported. Nystagmus may develop. Nystagmus in combination with diplopia and ataxia indicates dosage should be reduced. Periodic examination of the blood is advisable.

DILANTIN Sodium (diphenylhydantoin sodium) is available in several forms including Kapseals,® 0.03 Gm. and 0.1 Gm., bottles of 100 and 1,000.

REFERENCES: (1) Hammill, J. F.: J. Chron. Dis. 8:448, 1958. (2) Roseman, E.: Neurology 11:912, 1961. (3) Bray, P. F.: Pediatrics 23:151, 1959. (4) Chao, D. H., Druckman, R., & Kellaway, P.: Convulsive Disorders of Children, Philadelphia, W. B. Saunders Company, 1958, p. 120. (5) Crawley, J. W.: M. Clin. North America 42:317, 1958. (6) Livingston, S.: The Diagnosis and Treatment of Convulsive Disorders in Children, Springfield, Ill., Charles C Thomas, 1954, p. 190. (7) Ibid.: Postgrad. Med. 20:584, 1956. (8) Merritt, H. H.: Brit. M. J. 1:666, 1958. (9) Carter, C. H.: Arch. Neurol & Psychiat. 79:136, 1958. (10) Thomas, M. H., in Green, J. R., & Steelman, H. F.: Epileptic Seizures, Baltimore, The Williams & Wilkins Company, 1956, pp. 37-48. (11) Goodman, L. S., & Gilman, A.: The Pharmacological Basis of Therapeutics, ed. 2, New York, The Macmillan Company, 1955, p. 187.

14863

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit 32, Michigan




RECOGNIZE
THIS PATIENT?
"I don't sleep well . . . I dream a lot . . . wake up tired and irritable. I don't have any appetite . . . I'll never be cured."

When you recognize signs of depression and anxiety and associate them with an organic condition—add 'Deprol' to your therapy.

Typical conditions in which 'Deprol' should be considered for control of the associated depression and anxiety:

Cancer ■ Cardiovascular disorders ■ Arthritis ■ Menopause ■ Alcoholism ■ Obesity ■ Asthma, hay fever and related allergies ■ Chronic infectious diseases ■ Pregnancy and post partum ■ Dermatoses ■ G.I. disorders, and many other organic disturbances.

When you recognize depression and anxiety traceable to an emotionally charged situation with no somatic disorder—start the patient on 'Deprol'.

Typical situations in which 'Deprol' is indicated:

Fear of cancer or other life-threatening disease ■ Pre- and post-operative fears ■ Marital problems ■ Death of a loved one ■ Loss of work ■ Retirement problems ■ Financial worries, and many other stressful situations.

Deprol®

meprobamate 400 mg. + benactyzine hydrochloride 1 mg.

BRIEF SUMMARY: *Indications:* Depression, especially when accompanied by anxiety, tension, agitation, rumination or insomnia. *Side Effects:* Slight drowsiness and, rarely, allergic reactions, due to meprobamate, and occasional dizziness or feeling of depersonalization in higher dosage, due to benactyzine, may occur. Meprobamate may increase effects of excessive alcohol. Use with care in patients with suicidal tendencies. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Withdraw gradually after prolonged use at high dosage. *Complete product information available to physicians on request.*

USUAL ADULT DOSAGE: 1 tablet q.i.d. May be increased gradually, as needed, to 3 tablets q.i.d.; with establishment of relief, may be reduced gradually to maintenance levels.

SUPPLIED: Light-pink, scored tablets. Bottles of 50.

WALLACE LABORATORIES / *Cranbury, N.J.*

CD-9689

PROFESSIONAL MANAGEMENT SERVICE CAN HELP YOU BE A

FULL-TIME DOCTOR



Delegation of time-consuming work not requiring your training and experience releases you to more productive and rewarding work only you can do. The Professional Management Service is equipped to save you time . . . to relieve you and your staff of both menial and critical business tasks . . . and to increase your income. Our service offers you the benefits of specially trained, and equipped personnel under the careful supervision of specialists in medical business management, however you maintain complete control of your business activities!

We Offer These Services -

ACCOUNTS RECEIVABLE MANAGEMENT Professional Management Service trained bookkeepers, electric equipment and modern, proven-in-use methods designed to the needs of medical accounts are used to minimize the business workload in your office. Professional, accurate, itemized statements encourage prompt payment. This service pays big dividends in good will, time savings and net dollar return.

CONSULTATION Professional Management Service also includes special services, as needed, such as counseling on all insurance, investments, office personnel, fees, office lay-out, etc.

BASIC BOOKKEEPING SERVICE Formal accounting records are maintained by Professional Management Service. This includes income and expenses, depreciation, capital accounts, monthly financial report and tax return preparation.

PRE-COLLECTION PROGRAM A constructve approach to slow-paying accounts, subject to your control, this service is used with the ARM Service, above, or to supplement billing by your own staff. Custom designed to your needs and policies, but all time-consuming work is done by Professional Management Service.

COMPREHENSIVE BUSINESS SERVICE Most beneficial to physicians is the assumption of the complete business side of practice by the Professional Management Service in a co-ordinated, comprehensive service encompassing all functions named above.



PROFESSIONAL MANAGEMENT SERVICE

New Orleans, Louisiana

700 MAISON BLANCHE BLDG., PHONE 524 1177

A Specialized Service . . . Exclusively Professional



For comprehensive control of the whole pain complex...

Like a triad, the action of Trancogesic is direct and simple as 1,2,3. Its tranquilaxant component – chlormezanone – 1. reduces emotional reaction to pain . . . 2. decreases skeletal muscle spasm . . . and 3. its aspirin component dims the patient's perception of pain. Thus, Trancogesic controls the *whole* pain complex – *with unsurpassed tolerance.*

Each tablet of Trancogesic contains 100 mg. of chlormezanone and 300 mg. (5 grains) of aspirin. The usual adult dosage is 2 tablets of Trancogesic three or four times daily. Reactions to Trancogesic have been minor – gastric distress, and an occasional weakness, sedation or dizziness. Ordinarily, these may be reversed by a reduction in dosage or temporary withdrawal of the drug. Trancogesic is contrainindicated in persons known or suspected to have an idiosyncrasy to aspirin.

WINTHROP LABORATORIES, NEW YORK 18, N. Y.

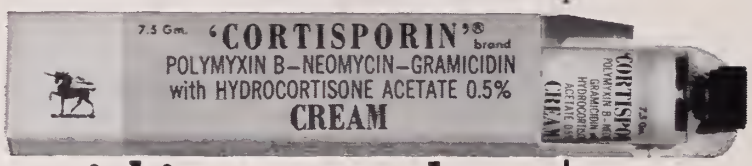
TRANCOGESIC*
CHLORMEZANONE 100 MG. with ASPIRIN 300 MG.

*TRADEMARK

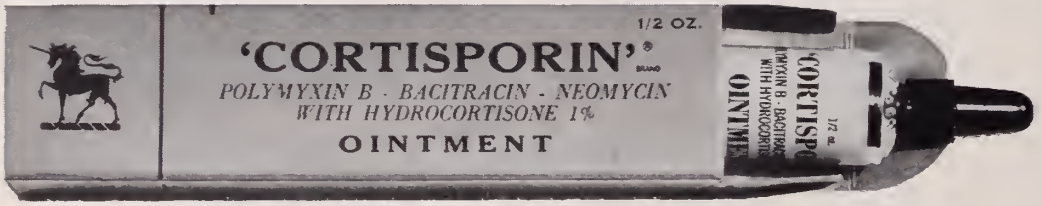
Winthrop

1777M

CHOOSE THE PRODUCT TO FIT THE NEED



a new vanishing cream base



a special low melting point base

anti-inflammatory
bactericidal
antipruritic
rarely sensitizing

CREAM—*Ingredients:* Each gram contains 'Aerosporin'® brand Polymyxin B* Sulfate 10,000 Units; Neomycin Sulfate (equivalent to 3.5 mg. Neomycin Base) 5.0 mg.; Gramicidin 0.25 mg.; Hydrocortisone Acetate 5.0 mg. (0.5%).

In a smooth, white, water-washable vanishing cream base with a pH of approximately 5.0. Inactive ingredients: liquid petrolatum, white petrolatum, propylene glycol, polyoxyethylene polyoxypropylene compound, emulsifying wax, distilled water, and 0.25% methylparaben as preservative.

Available: In tubes of 7.5 Grams.

OINTMENT—*Ingredients:* Each gram contains 'Aerosporin'® brand Polymyxin B* Sulfate 5,000 Units; Zinc Bacitracin 500 Units; Neomycin Sulfate 5 mg. (equivalent to 3.5 mg. Neomycin Base); Hydrocortisone 10 mg. (1%).

In a special white petrolatum base.

Available: In tubes of ½ oz. and ⅛ oz.

*U.S. Patent Nos. 2,565,057–2,695,261

Indications: Wherever inflammation or infection occurs and is accessible for topical therapy.

Contraindications: These drugs are contraindicated in tuberculous, fungal or viral lesions (herpes simplex, vaccinia and varicella).

Caution: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

Announcing a valuable new aid for all who treat young patients

A New Book!
CURRENT PEDIATRIC THERAPY
Edited by Gellis and Kagan

This entirely new book, *Current Pediatric Therapy*, will enable you to enjoy the same type of specific *therapeutic* recommendations for your young patients that readers of *Current Therapy* have been receiving for some fifteen years. Dr. Sydney S. Gellis and Dr. Benjamin M. Kagan have edited this new work, with contributions by over 200 leading authorities. Therapeutic details are pinpointed for more than 300 diseases—from *Kwashiorkor* and *Protein Deficiency* to *Infantile Cortical Hyperostosis*, and *Prematurity*. All the diseases and disorders in this book are treated in terms of how they afflict infants and children. Since this book equals Current Therapy in size, you can see how valuable this comprehensive text can be in this area of your practice.

All discussions are approached from the pediatric point of view, with dosages, diets, prescriptions, etc., written for infants and children. This new *Current Pediatric Therapy* concentrates on giving you the best treatments available today as they are currently being used by specialists with wide experience in specific areas. You will not find involved discussions of diagnosis and etiology here—just concise, clearly delineated details on the best treatments for virtually all the diseases and disorders you will be called upon to manage in your child patients.

Whether you need a diet for a phenylketonuric child, help on deciding the proper dosage of antiepileptic medication, or late information on immunization schedules, you'll find it spelled out precisely in *Current Pediatric Therapy*.

By 224 Leading Authorities. Edited by SYDNEY S. GELLIS, M.D., Professor of Pediatrics, Boston University School of Medicine; Director of Pediatrics, Boston City Hospital; and BENJAMIN M. KAGAN, M.D., Director of Pediatrics, Cedars of Lebanon Hospital, Los Angeles. About 864 pages, 7-7/8″ x 10-7/16″. About $16.00. New—Ready January!

Up-to-date help for your research and for your evaluation of other's work

New (2nd) Edition!
Mainland's ELEMENTARY MEDICAL STATISTICS

Here is an enlarged and improved *New (2nd) Edition* of one of the most respected American texts on medical statistics. Dr. Mainland has devoted the first ten chapters to expanded discussions on statistical *thinking*, rather than arithmetic. These beginning chapters are in the form of questions which you can ask yourself regarding your own research, and which you can apply to evaluation of the work of others. Each question is the basis for an explanatory discussion. In this section you'll find vital information on: *the nature of the research; purpose and general method of investigation; the population and sampling; interpretation; sample sizes; collecting and examining data.* Next, specific methods of analysis are presented and discussed. Chief attention is paid to methods a small scale investigator would use. In this latter portion of the book you'll find such topics as: *random processes; standard deviation; frequency distribution of measurements; causes of bell-shaped distribution; estimation of population percentiles; correlation coefficients, etc.*

By DONALD MAINLAND, M.B., Ch.B., D.Sc., Professor and Chairman, Department of Medical Statistics, New York University College of Medicine. 381 pages, 6⅛″ x 9¼″, illustrated. About $9.00.
New (2nd) Edition—Just Ready!

To Order Mail Coupon Below!

W. B. SAUNDERS COMPANY
West Washington Square, Philadelphia 5, Pa.

Please send when ready and bill me:

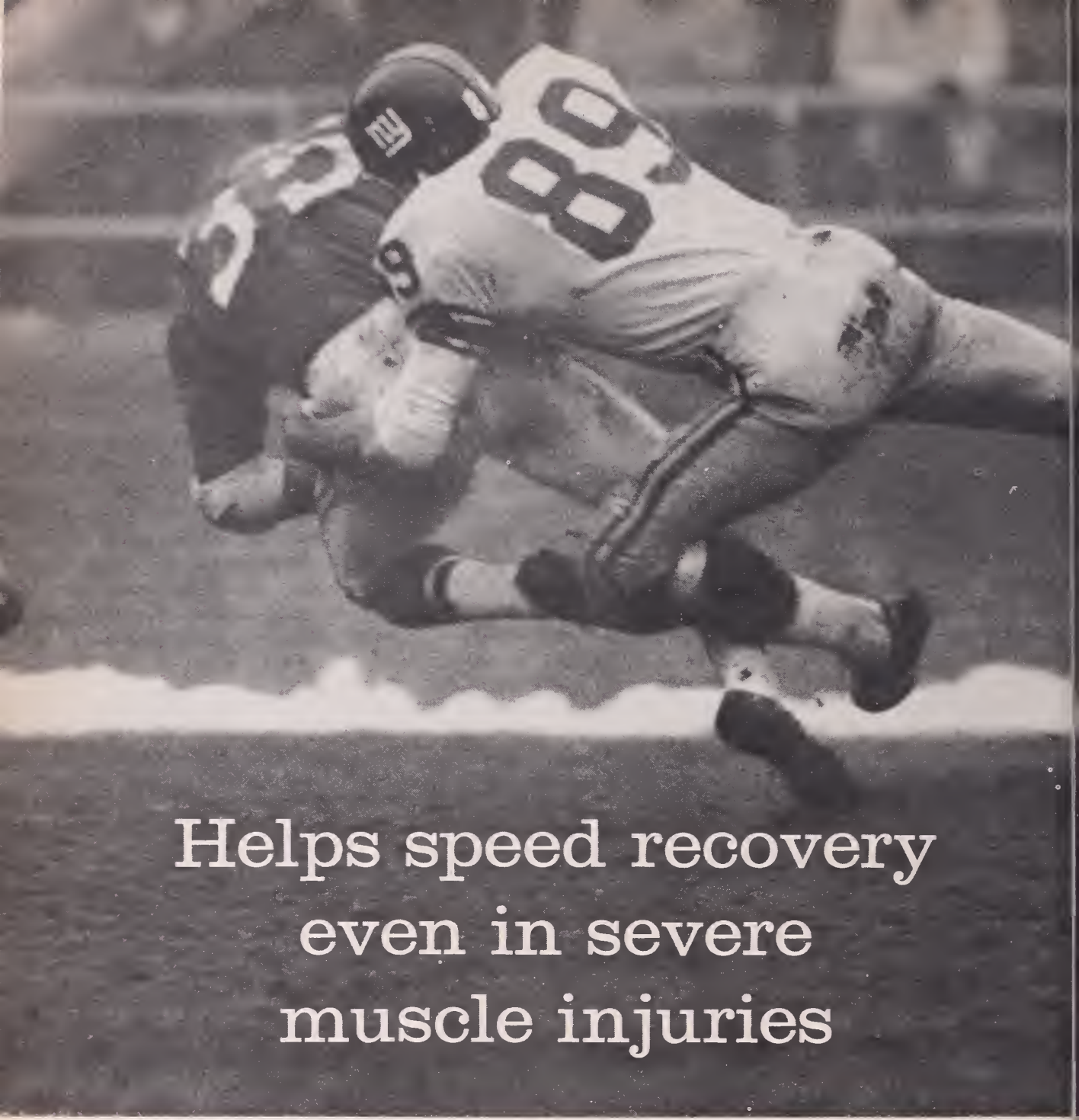
☐ *Current Pediatric Therapy*.....About $16.00

☐ Mainland's *Elementary Medical Statistics*.....About $9.00

Name.....

Address.....

SJG 10-63



Helps speed recovery even in severe muscle injuries

Whether your muscle-injury patient is a professional athlete or just a weekend golfer, you can expect rapid results with 'Soma' (carisoprodol).

This unique drug breaks up both muscle spasm and pain at the same time. Onset of action takes only 30 minutes, and your patient will usually begin to feel better within hours.

As Conant demonstrated in a study of 106 patients with musculoskeletal injuries, 88% of the patients treated with 'Soma' (carisoprodol) achieved good to excellent results. *(Clinical Medicine*, March, 1962.)

Carisoprodol seldom produces side effects. Occasional drowsiness may occur, usually at higher than recommended dosage. Individual reactions may occur rarely. For severe athletic strains or everyday sprains, you can rely on 'Soma' (carisoprodol) to help speed recovery with notable safety.

USUAL DOSAGE: ONE 350 MG. TABLET Q.I.D.

The muscle relaxant with
an independent pain-relieving action

Soma®
carisoprodol

Wallace Laboratories, Cranbury, New Jersey

why does 150 mg.



do more than 250 mg.



of other tetracyclines?

Because it has up to 3½ times the *in vitro* antibacterial activity[1]...combined with lower rate of decay in serum, slower renal clearance...a favorable depot effect, resulting from protein binding...all providing rapid, higher and sustained *in vivo* activity with as much as 2 days' extra activity.

DECLOMYCIN®

DEMETHYLCHLORTETRACYCLINE HCl

Effective in a wide range of everyday infections—respiratory, urinary tract and others—in the young and aged—the acutely or chronically ill—when the offending organisms are tetracycline-sensitive. *Side Effects* typical of tetracyclines which may occur: glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis, dermatitis, overgrowth of nonsusceptible organisms. Also: photodynamic reaction (making avoidance of direct sunlight advisable) and, very rarely, anaphylactoid reaction. Reduce dosage in impaired renal function. *Capsules*, 150 mg. and 75 mg. of demethylchlortetracycline HCl. *Average Adult Daily Dosage:* 150 mg. q.i.d. or 300 mg. b.i.d. 1. Sweeney, W. M.; Dornbush, A. C., and Hardy, S. M.: Demethylchlortetracycline and Tetracycline Compared. Relative *in vitro* Activity and Comparative Serum Concentrations During 7 Days of Continuous Therapy. *Amer. J. Med. Sci.* 243:296 (Mar.) 1962.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

7185-3

Lederle

neither **tension,** nor **spasm,**
nor **stasis**
stays this patient
from his
appointed rounds



DECHOLIN-BB®

. especially when
UPPER G.I. COMPLAINTS
have biliary implications

for nervous **tension**

for smooth-muscle **spasm**

for biliary/intestinal **stasis**

Each Tablet Contains:

BUTABARBITAL SODIUM 15 mg. (¼ gr.).
WARNING: May be habit forming

BELLADONNA EXTRACT 10 mg. (⅙ gr.).

DEHYDROCHOLIC ACID 250 mg. (3¾ gr.).

Average adult dose: 1 or, if necessary, 2 tablets three times daily. **Precautions:** Observe patients periodically for increased intraocular pressure and barbiturate habituation or addiction; caution drivers against possible drowsiness. **Side effects:** Dehydrocholic acid may cause transitory diarrhea; belladonna may cause blurred vision and dry mouth. **Contraindications:** Biliary tract obstruction, acute hepatitis, glaucoma, prostatic hypertrophy. **Available:** DECHOLIN-BB, bottles of 100 tablets. **Also:** DECHOLIN® with Belladonna (dehydrocholic acid, 250 mg.; belladonna extract, 10 mg.) and DECHOLIN® (dehydrocholic acid, 250 mg.), bottles of 100 and 500 tablets.

AMES COMPANY, INC
Elkhart • Indiana
Toronto • Canada

3489263

Schering



Your recommendation of **Coricidin** assures responsible treatment of common colds. For added decongestant action, recommend Coricidin "D" Decongestant Tablets.



Each CORICIDIN Tablet contains: CHLOR-TRIMETON® (chlorpheniramine maleate, Schering) 2 mg., aspirin 0.23 Gm., phenacetin 0.16 Gm., caffeine 0.03 Gm.

Each CORICIDIN "D" Tablet contains phenylephrine 10 mg. in addition to the above ingredients.

CORICIDIN Tablets, brand of antihistaminic-antipyretic-analgesic compound

S-161



It is unlawful to duplicate this key

This is the key that opens the box that contains the labels. Only authorized supervisory personnel have the key to transfer labels from the "lockup box" to the labeling machine. ■ These responsible Lilly employees regard labels as serious business. To make certain that the right label appears on each container, all labels are kept under lock and key until needed on the finishing line. Only the quantity needed to finish the lot is dispensed. When transferred to the finishing belt, the appropriate number of labels is placed in the labeling machine. Excess labels are put in the lockup box until needed. At night, the supervisor returns unused labels to the box lest some get lost or misplaced. ■ This is just one more precaution in an endless list of rules that contribute immeasurably to the quality of the finished product.

Eli Lilly and Company • Indianapolis 6, Indiana, U.S.A.

Lilly

300192

The Journal

of the

Louisiana State Medical Society

$4.00 Per Annum, 35c Per Copy
Vol. 115, No. 10

OCTOBER, 1963

Published Monthly
1430 Tulane Avenue, New Orleans 12, La.

Pediatric Nasal Surgery*

• This paper is a detailed and informative account of essentials of pediatric nasal surgery. The author clarifies the diagnostic approach and the surgical procedures.

RALPH H. RIGGS, M. D., F.A.C.S.
Shreveport

NASAL injuries resulting in nasal deformities occur frequently during the prenatal, natal, and early postnatal period of life. Many of these may, at the time of injury, appear to be insignificant, but they may result in serious nasal deformities in later life. For this reason, it is extremely important to examine these children thoroughly and to correct pathologic nasal conditions surgically if conservative measures have proved ineffective. This is not to say that every child with a nasal deformity should have it surgically corrected. Those requiring operative treatment must be carefully selected after thorough examination and unsuccessful nonsurgical measures.

Etiology

Trauma is generally agreed to be the cause of most deformities of the nose. Of 709 newborns on whom photographs were made within the first twenty-four hours of life, more than six per cent showed definite evidence of gross lateral displacement of the external nasal pyramid.[1] The incidence of simple flattening ranged from 30 to 60 per cent. Spontaneous restoration is common. Such deformities are believed to be due to birth injuries.[2] However, some babies are born with deformities thought to be healed injuries. Kirchner [3] reported three such instances; surprisingly enough, the noses of his patients returned to the normal position after a few months. The occipitonasal diameter in the newborn is frequently equal to or greater than the occipitomental diameter, and the nasal structures, being soft tissues, undergo considerable distortion while passing through the birth canal. That a larger percentage could sustain some internal injury about the premaxillary area which could not be detected by photographs and perhaps not even by examination seems plausible.

Babies sustain many bumps on the nose, especially during the crawling and first stage of walking. These injuries come to the attention of the physician rarely. However, a severe nasal injury sustained in this way should not be considered trivial.[4] Such injuries may later be seen as hematomas of the septum or over the upper lateral cartilages with possible absorption of these cartilages.[5] Also, septal abscesses may develop from such injuries. In children the most frequent nasal structure that is injured is the cartilaginous struc-

* Presented at the meeting of the American Otorhinologic Society for Plastic Surgery, March 25-29, 1963, New Orleans.

ture, but the bony parts may also be damaged. It is easy to overlook bony injuries, because the nasal bones are membranous and underdeveloped. Injury of the frontal process may result later in a serious deformity.

The importance of the center of the septum mosaic, described by Mosher in 1907,[6] has been re-emphasized by Cottle and coworkers.[1] This is the area in the nose where the cartilaginous septum, vomer, maxilla, and premaxilla meet. Injury



Figure 1 (Case 1): A. Aged 18 months. Both nasal cavities obstructed by paraseptal cartilages. B. Seven years later. The nose is growing.

to this area early in its development can produce a variety of changes in growth and can retard normal development of the nose.

Some children are born with embryonic remains in the septal space (para-septal cartilage); others have extremely small nostrils, due in some cases to a tension



Figure 2 (Case 2): A. Aged 5½ years. Note small openings of nostrils. B. Two and one-half years postoperatively. Note increase in size of nose.

septum. It should be remembered that any number of congenital malformations may be present.

Clinical Manifestations

Breathing through the mouth is the chief symptom of these children. Other manifestations include frequent colds, nasal and postnasal drainage, sinus infections, thumb or finger sucking, nervousness, irritability, insomnia, apparent failure of mental development (as evidenced by poor scholastic standing), and in some cases greatly decreased stamina.

On examination a number of abnormalities may be found. The caudal end of the septum may be located in the right or left vestibule. One nasal cavity may be occluded by the cartilaginous or bony septum, or both, with too much space in the opposite side. Cartilage, bone, or both, including scar, may be impacted along or below the inferior turbinate on one side or the other. Occasionally, the septum may be so thick that it obstructs both sides. Often, normal valve action is prevented because the upper lateral cartilages are too far from the septum, a condition known as "ballooning." The septum may be perfectly straight but the upper lateral cartilages are too close to it. Obviously, infections, tumors, foreign bodies, allergy, and hypertrophied adenoids must be considered in the differential diagnosis.

Malalignment of the external nose, "C" shaped or other deformities, "saddling," and underdevelopment of one part and overdevelopment of another are other pathologic conditions that may be found. In the growing child, it is important to examine the teeth and palatal arch, as well as the facial features for malalignment. Superficial examination of the chest may disclose considerable underdevelopment due possibly to an abnormal nose.

Surgical Treatment

Acute nasal injuries may involve the skin, subcutaneous tissues, bony vault, cartilaginous vault, lobule, septum, or a combination of any of these. The rhinologist should repair not only recent injuries but also preexisting pathologic anomalies if feasible. Treatment of acute nasal injuries has been adequately discussed by others.[7, 8]

Healed injuries should be corrected surgically if, in the opinion of the rhinologist, pediatrician, or family physician, nonsurgical methods have proved ineffective. This should be done before too many anomalies of growth start developing. Even though a small juvenile nose is less efficient than a normal one, it is much better than one presenting an obstructing septum with or without a depressed lateral wall.[9]

It is important to realize that a child's nose has growth potential.[10] In the process of development[11] changes gradually



Figure 3 (Case 3): A. Aged 16 years. Malalignment of nose, high palatal arch, mouth open. B. Six months postoperatively. Note expression.



Figure 4 (Case 4): A. Aged 14 years. Deformity of external nose and nasal septum; mouth breather. B. Two and one-half years later. No infections the past year.

take place at least until the end of the second decade of life. It is believed by some that the nose does not stop "growing" until about the age of 25 years. However, many children need relief before that time, and in such cases the rhinologist should not "watch and wait." Often just doing a "little bit" will be of great help. It seems unreasonable to permit a deformed nose to develop (if it will) into a larger deformity when a corrective operation performed early in life could obviate psychologic difficulties later. Even more important is reestablishment of a better nasal air passage, its associated reflexes, and all that this means.[12]

Operation of the Nasal Septum

In my experience operation of the nasal septum has been the most important procedure. One of my patients (Fig. 1), 18 months old, required only removal of paraseptal cartilages without disturbing the middle cartilage; another (Fig. 2) required removal of a small amount of cartilage from the dorsum and caudal end of the septum after the upper lateral cartilages had been separated submucosally.

During the past few years I have used the "maxillary-premaxillary" approach of Cottle[13] on all septums with abnormalities in the premaxillary area.[14] This has proved to be a conservative procedure by which any part of the nasal septum can be reached and judiciously treated.[15] The support of the cartilaginous vault and roof can be controlled and all the required changes can be made. The functional result is good and the sequelae are minimal.[16]

In most of my patients younger than ten years of age, the deformity was limited to the cartilaginous vault, which could be corrected without operation on bone. However, lateral osteotomies were performed when it was necessary to realign the external nasal pyramid, as operation on the septum alone would not produce the desired results.

Attention to the upper lateral cartilages is also important.[17] These cartilages can be mobilized submucosally via the septum, or they may be uncovered through intercartilaginous incisions and attended to as necessary. Usually, the cartilage of the lobule requires little attention.[18] It may be uncovered, if necessary, through intercartilaginous incisions or through incisions over the caudal end of the lobular cartilages; the spring may be broken at the dome or where needed. In children they should be neglected unless they are badly deformed, asymmetrical, or both.

The results of such operations are, in general, most gratifying. Some children may require additional surgical treatment later, and both the family and the rhinologist should be aware of this.

A few cases will be cited to illustrate the kind of results that may be expected

from timely surgical treatment in indicated cases.

Case Reports

Case 1 (Fig. 1): An 18-month-old baby boy had suffered constant colds and high fever, was nervous, and slept poorly. After removal of the paraseptal cartilages in November 1955, he could breathe through his nose, had few colds, slept well, and was no longer nervous.

Case 2 (Fig. 2): A 5½-year-old girl, breathed through her mouth and was extremely nervous and restless while sleeping. In August 1960 a small amount of cartilage was removed from the dorsum and caudal end of the septum after the upper lateral cartilage had been separated sub-



Figure 5 (Case 5): A. Aged 9 years. Caudal end of septum in right vestibule, left nasal cavity obstructed, mouth open. B. Fourteen months later. Note mouth closed and intranasal space.

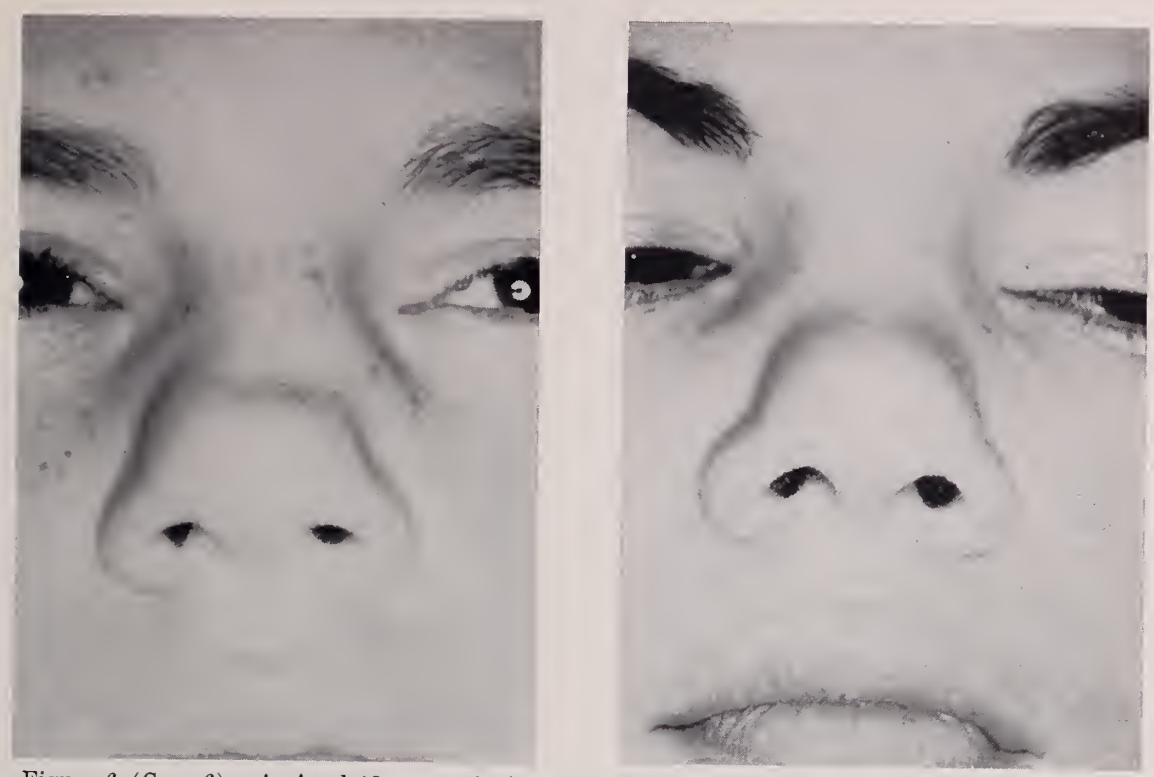


Figure 6 (Case 6): A. Aged 12 years. Deformity of external nose and septum; note asymmetry of lobular cartilages. B. Two and one-half years postoperatively. Nasal pyramid is realigned and the lobular cartilages are symmetrical.



Figure 7 (Case 7): A. Aged 4½ years. Deformity of external nose and septum; mouth open. B. Six months postoperatively. Note alignment of external nasal pyramid and closed mouth.

mucosally. Postoperatively, she could breathe through the nose, was no longer irritable, and had no difficulty sleeping.

Case 3 (Fig. 3): This 16-year-old boy possibly should have been operated on earlier in life. When I saw him, he was complaining of cough with vomiting. Heart trouble was suspected. He had little stamina, his chest was underdeveloped, and his school attendance was poor. The nasal septum was reconstructed, the external nose realigned, and the upper lateral cartilages and lobule operated on in May 1957. Thereafter the patient did not cough or vomit. He can now run and play, has greatly increased stamina, and attends school regularly.

Case 4 (Fig. 4): A 14-year-old boy was underdeveloped generally, had frequent colds and sore throats with high fever, and breathed through his mouth. The nasal septum was reconstructed and the external nasal pyramid realigned in August 1960. Postoperatively, he could breathe through the nose, had fewer infections, and his scholastic standing rose from the bottom of the class to fourth from the top the next year.

Case 5 (Fig. 5): A 9-year-old boy breathed through his mouth and was failing in school. The nasal septum and nasal spine were reconstructed, the lobular cartilages were mobilized through intercartilaginous incisions, and the upper lateral cartilages were operated on in December 1960. Postoperatively, the patient could breathe through the nose, slept better, and improved in his school work.

Case 6 (Fig. 6): A 12-year-old girl breathed partially through the mouth. When she was six years old, a nasal deformity was detected. The nasal septum and spine were reconstructed, the external nasal pyramid was realigned, and the upper lateral and lobular cartilages were operated on in July 1960. Postoperatively, the child could breathe through the nose and she is now doing better in school.

Case 7 (Fig. 7): A 4½-year-old girl had sustained a nasal injury two years previously. She breathed through her mouth. The nasal septum was reconstructed, median osteotomy was performed, and the upper lateral cartilages were operated on in November 1960. Postoperatively, the child had no difficulty breathing through her nose.

Summary

Surgical correction of septal and nasal defects is indicated if the desired results cannot be obtained by nonsurgical procedures. This can be safe and usually will alleviate many symptoms if adequately performed. Cases have been cited to illustrate the numerous complaints encountered and the results that may be expected from timely surgical correction of nasal deformities in children. It must be realized that every child with a nasal deformity does not require surgical correction. Those requiring operation must be carefully selected.

References

1. Cottle, M. H. et al.: Early nasal injuries; a factor in nasal, septal, dental and facial deformities. Exhibit at the meeting of the American Medical Association, Section on Laryngology, Otology and Rhinology in Chicago, June 1956.

2. Steiner, A.: Certain aspects of nasal trauma in the prenatal-natal period. Maryland State M. J. 8:557, Oct. 1959.

3. Kirchner, J. A.: Traumatic nasal deformity in the newborn. A.M.A. Arch. Otolaryng. 62:139, Aug. 1955.

4. Cottle, M. H.: Nasal injuries; corrective surgery of nasal septum and external pyramid. Study Notes and Laboratory Manual, Pp. 95-102, Published by the American Rhinologic Society, 1960.

5. Hinderer, K. H.: Common causes of disturbed nasal function. Postgrad. Med. 30:580, Dec. 1961

6. Mosher, H. P.: The premaxillary wings and deviations of the septum. Trans. 13th Ann. Meet. Am. Laryng., Rhinol. & Otolaryng. Soc., Pp. 26-56, 1907.

7. Aagensen, W. J., Morrison, L. E., II and Sputh. C. B., Jr.: How to handle acute nasal injuries. A.M.A. Arch. Otolaryng. 60:367, Sept. 1954.

8. Anderson, J. R.: Modern treatment of nasal fractures. J. Mississippi M. A. 1:78, March 1960.

9. Wexler, M. R.: Nasal surgery in children. Tr. Pacific Coast Oto-Ophth. Soc. Pp. 215-226, 1957.

10. Gilbert, G. G. and Segal, S., Jr.: Growth of the nose and the septo-rhinoplastic problem in youth. Trans. Am. Oto-Rhinol. Soc. Plast. Surg. 2:9, 1959.

11. Morrison, L. E.: Some relationships between embryology and our work. Presented at Postgraduate Course in Reconstruction Surgery of the Nasal Septum and External Pyramid, University of Cincinnati, College of Medicine, Cincinnati, Ohio, April 11-19, 1958.

12. Cottle, M. H.: Concepts of nasal physiology as related to corrective nasal surgery. A.M.A. Arch. Otolaryng. 72:11, July 1960.

13. Cottle, M. H., et al.: The "maxilla-premaxilla" approach to extensive nasal septum surgery. A.M.A. Arch. Otolaryng. 68:301, Sept. 1958.

14. Klaff, D. D.: The surgical anatomy of the anterocaudal portion of the nasal septum; a study of the area of the premaxilla. Laryngoscope 66:995, Aug. 1956.

15. Riggs, R. H.: The maxillary-premaxillary approach to septal surgery. Eye, Ear, Nose & Throat Month. 39:157, Feb. 1960.

16. Riggs, R. H.: Complications of submucous resection. J. Louisiana State M. Soc. 109:361, Oct. 1957.

17. Cottle, M. H.: Surgery of the upper lateral cartilages; corrective surgery of nasal septum and external pyramid. Study Notes and Laboratory Manual. Pp. 78-85, Published by the American Rhinologic Society, 1960.

18. Cottle, M. H.: Surgery of the lobular cartilages; corrective surgery of nasal septum and external pyramid. Study Notes and Laboratory Manual. Pp. 61-69, Published by the American Rhinologic Society, 1960.

What Physicians Should Know About Nasal Plastic Surgery*

• The author presents the facts of nasal plastic surgery which are of importance to the patient's physician. He discusses clearly the advantages, outlook and results.

JACK R. ANDERSON, M. D.
New Orleans

TWENTY years ago cosmetic surgery was largely restricted to those in theatrical circles or to the *avant-garde* of international society. Today it is commonplace among people in all walks of life; the idea of resorting to surgery for the purpose of improving one's appearance has become more socially acceptable and respectable.

The public wants information about such surgery and they should be able to turn to their closest medical advisors for information and guidance. However, the sad fact is that most physicians cannot fill the request because they know too little about cosmetic surgery and the profound and sustained benefits it can effect; others are so intolerant and strongly prejudiced against it that they have a natural and true inability to comprehend or make allowance for an opposite point of view.

Unfortunately, the patient is then at the mercy of the writers of articles appearing in newspapers, fashion and movie magazines, and cheap paperback editions. Such articles are usually highly colored, filled with distortions and sensationalism, and frequently seem more intent on promoting and selling the services of unethical special interests rather than giving the public factual information.

The purpose of this presentation is to supply physicians with essential and accurate background information that they may use in discussing cosmetic surgery with inquiring patients.

* Presented at the Eighty-third Annual Meeting of the Louisiana State Medical Society, May 7, 1963, in New Orleans.

Psychologic Considerations

What an individual thinks of his appearance (i.e., his self-image) is frequently a very important factor in the personality he projects to others. This is why a change in facial appearance resulting from cosmetic surgery may initiate a psychotherapeutic chain-reaction far out of proportion to the surgical result. If the person feels that he looks better, his personality improves; human relations are such that others respond by an improved attitude towards him; the patient senses their changed manner, which, in turn, reinforces his personality improvement. Many such instances could be recorded.

Two points are well worth remembering.

First, the psychologic need for correction is not directly proportionate to the size of the deformity. Thus, some with mild deformities have great need for correction while others with large ones feel no need whatsoever to have them rectified.

Secondly, the psychologic improvement resulting from surgery bears little relationship to the degree of surgical improvement. More important is the amount of need he had for improvement and the amount of improvement the patient *feels* he has obtained.

Some physicians have a closed mind on the subject because they feel that anyone desiring cosmetic surgery should have psychiatric care. Actually, a careful psychiatric study[1] has proven that there is only a small group of patients whose mental and emotional problems contraindicate surgery. In fact, sometimes surgery is able to speedily effect changes in attitude which would require many months of psy-

chiatric care; in others, it can be used in conjunction with conventional psychotherapy.

Rarely, adverse psychologic effects follow cosmetic surgery. These generally occur in individuals who seek perfection, not merely improvement, or in those who hope that the improvement obtained will bring them social, emotional, or sexual benefits which are totally unrealistic.

Moral Considerations

Cosmetic surgery should be considered within the framework of the *mores* of the age in which we live.

Most people in today's competitive world try to put their best foot forward in respect to appearance. Is this right or wrong?

In addition to the sums spent on stylish clothes and accessories, increasing millions of dollars are being spent each year for cosmetics, hairdo's and skin care, and for "courses" and "machines" for the purpose of reducing and enhancing the figure. These various procedures give only transient or temporary improvement and must be repeated over and over again.

Cosmetic plastic surgery might be considered a logical extension of the above. However, one additional advantage looms important—the improvement is permanent following successful rhinoplasty, otoplasty, and mentoplasty, and relatively long-lasting after elimination of facial and neck wrinkles and the signs of progressive aging about the eyes.

What stand do religious moralists take on the subject of altering one's appearance for cosmetic reasons?

Pope Pius XII made pronouncements on this subject before the Tenth National Convention of the Italian Society of Plastic Surgery in Rome. He said that physical beauty is a good in the Christian Scale of values that deserves care and esteem. The morality of a request for cosmetic surgery depends on the motives for which it is sought; it would be considered immoral, for example, to request surgical intervention for sexual or criminal reasons.

However, when the motives conform to the principles of morality, "esthetic surgery, far from opposing the will of God in restoring perfection to the greatest work of His visible creation, seems rather to conform better with it, and renders clear testimony to its wisdom and goodness."

Since modern medicine is dedicated to administering to the whole individual, i.e., to his emotional and mental as well as his physical problems, cosmetic facial surgery is not only ethical and permissible but also a necessity in some cases.

Much too frequently patients relate that when they broached the subject of having some type of cosmetic surgery to their physician they were summarily dismissed with, "What's wrong with your nose? Forget about it; that's a lot of foolishness."

What such patients really want is an unbiased medical opinion, not a moral judgment. They want to know such things as: is the procedure formidable, will it involve much pain and suffering, are the chances for improvement good, what surgeon should they consult, etc.

General Considerations

Recourse to surgery always merits serious consideration as to the choice of surgeon. This is especially true in the case of rhinoplasty, an operation which has been aptly termed "surgery of millimeters" because the margin can be that small between a pleasing and a poor cosmetic result or between a normal functioning and a poorly functioning nose. Since any physician with a modicum of surgical ability can be taught the technic of the operation, it becomes obvious that the rhinoplastic surgeon must have solid training in rhinology also. This provides him with a profound appreciation of the fine points of nasal physiology so that surgical derangements can be avoided. This also enables him to become thoroughly familiar with intranasal surgical technics which must be combined with rhinoplasty so frequently; in this connection it should be pointed out that proper management of

the nasal septum is the key factor in nine out of ten rhinoplasties.

Cosmetic surgical procedures require more meticulous attention to detail but are less formidable and pose less risk than most major surgical procedures. This may be deduced from the following: these operations are usually performed under local anesthetic following heavy preoperative sedation and analgesia; most of the patients are fully ambulatory and require no analgesics after the first 24 hours postoperatively; only rarely is the patient hospitalized more than two days, and most rhinoplasty, otoplasty, and blepharoplasty patients may return to work or school in one week.

Specific Facts About Rhinoplasty and Mentoplasty

Nasal Plastics (Rhinoplasty)

Mechanics: generally a hump is removed, the nose narrowed and shortened, and the nasal tip refashioned; if there is a saddle deformity, bone, cartilage, or inert substances are used as implants. Management of the nasal septum is a major factor in the functional outcome; in most cases it is done simultaneously with the nasal plastic.

Preparation: photographs should be taken for the purpose of planning the modifications to be made in the light of facial contour, inclination of the forehead and chin, the patient's height, and other considerations. An antibiotic is usually administered for a short time preoperatively.

Minimum age varies, depending on facial development. Generally, the age should be about 14 or 15 for girls and a little later for boys. Earlier surgery may interfere with normal growth, or growth may distort the results of the corrective surgery.

Operating time is one or two hours in the average case; this depends to a large extent on the amount of septal work to be done.

External scars are avoided, unless the nostrils must be narrowed; placement of incisions in such cases makes external scars virtually invisible. Otherwise, the operation is performed entirely intranasally.

Hospitalization is for a period of only twenty-four hours after surgery usually.

Morbidity: the patient is ambulatory within 24 hours and encouraged to remain so. Edema and ecchymosis are usually moderate, painless, and practically gone in one week. The patient may return to school or work in four to seven days. Nasal stuffiness in varying amounts is present for several weeks. Bandage remains *in situ* for five to seven days.

Duration of improvement: permanent.

Chin Plastic (Mentoplasty)

In one or two cases out of ten the rhinoplastic surgeon finds it necessary to increase projection of the chin in order to create an aesthetically pleasing profile. In effect, what the patient needs is a "profileplasty." This adds little morbidity to the procedure and is well worthwhile. The specific details about this procedure, performed at the same time as rhinoplasty, are as follows.

Mechanics: the usual case is one requiring increasing the projection of a receding chin. The incision is made in inner aspect of lower lip well above the gingivolabial sulcus to avoid external scarring. The nasal hump, cartilage, bone, or inert material may be used as implants. This procedure is often done concurrently with the nasal plastic operation.

Preparation: photographs are used to determine just how much increased projection is necessary to bring the chin in harmony with the remainder of the profile.

Minimum age is 14 years or thereabouts. The operating time is 15 to 20 minutes. External scars are avoided.

Hospitalization: may not be necessary and the operation may be done on outpatient basis.

Morbidity: the patient is ambulatory immediately. May resume usual activities in two to three days. There are mild edema, and little ecchymosis.

Duration of improvement: permanent.



Figure 1a. Frontal view before nasal plastic.



Figure 2a. Lateral view before nasal plastic.



Figure 1b. Frontal view after nasal plastic.



Figure 2b. Lateral view after nasal plastic.

Conclusions

Improvement in preoperative preparation and surgical technic has lessened morbidity and increased the general average of good results obtained in rhinoplasty to such an extent that it can be recommended without hesitation in the same manner, for instance, as a physician would recommend orthodontic treatment for youngsters.

Summary

1. Psychological considerations concerning surgery are presented.

2. The moral aspects of such surgery are discussed.

3. Details of the nasal plastic operation are outlined.

4. Inasmuch as mentoplasty is frequently combined with rhinoplasty, the procedure is considered.

5. Photographs of the results of a typical nasal plastic are presented. (Figs. 1 & 2).

References

1. Edgerton, M. T., Jacobson, W. E., and Meyer, E.: Surgical Psychiatric Study of Patients Seeking Plastic Cosmetic Surgery; Ninety-eight Consecutive Patients with Minimal Deformity. Brit. J. Plas. Surg. 13:2:136., July, 1960.

Pharmaceutical Confusion in Soviet Russia

Information about new drugs is given irregularly so that practicing physicians do not know about them and are deprived of the possibility of using them. The process of replacing old-fashioned drugs by new and more efficient ones is too slow. It is necessary to point out that as yet physicians and pharmacists are poorly informed about ne wdrugs. Any information is purely accidental. . . . The pharmacological council has advised the State Publishing House of Medical Literature to publish as soon as possible four publications on new pharmaceutical products. Too much time is wasted in pharmacies on compounding prescriptions, and this is only because the physicians do not know about the precompounded drugs. . . . Obviously, only very few general practitioners follow the literature in which the new drugs are described. . . . On the other hand, pharmacy employees do not inform physicians about existing drugs. They do not come to the polyclinic and do not promote the new pharmaceuticals.—Quoted from the **Medical Worker,** USSR Ministry of Health publication in **Canadian Med. Assn. J.,** Feb. 9, 1963.

Relaxed Management of the Ambulatory Diabetic*

• The author feels that the diabetes regimen most beneficial to the patient is one which can be fitted into his pattern of living with a minimum of distortion. He asks for flexibility in care which may not necessarily bring rigid chemical and clinical control.

A. A. HEROLD, JR., M. D.
Shreveport

WITH the discovery of insulin by Drs. Banting and Best in 1921, and the various refinements of this product which have come forth since that time, it would seem that the management of diabetes mellitus would have been greatly simplified. However, it would seem that in many respects the exact opposite is true and that today the management of this disorder has become more complicated and, extraordinarily enough, in many respects more frightening than it was during the pre-insulin era. Of course, in the pre-insulin days the primary treatment consisted of a starvation-type diet, and the young diabetic was often the victim of the first infectious disorder which he contracted after the development of the disease. Today the outlook is, of course, much improved, and it is this lengthening of prognosis which has led to much frustration on the part of both physician and patient.

The Patient Views Diabetes with Alarm

Let us assume for the purposes of discussion that a patient with one or several of the manifestations of clinical diabetes mellitus seeks help from his physician and, after appropriate examination, is informed that he has diabetes mellitus. This produces great emotional turmoil for most patients and many physicians. The physician then confronts a confused and frequently hostile patient who has come to him seeking help for what he regarded as a minor ailment which could be corrected by appropriate medication. Instead, he finds that he has an incurable disorder about which he has heard many dreadful things, and is inclined to feel that a useful life from his point of view has just about terminated and that he will be an invalid who will lie about waiting for a premature aging process, and frequently an early death. It is in this situation that the attending physician can be of immense value to the patient.

Adequate Explanation to Patient is Needed

After the diagnosis has been unequivocally established, the visit with the patient should take at least an hour. During this time the physician should show no anxiety or dismay. Frequently the patient will be watching the physician carefully for signs of anxiety or panic and will himself become greatly disturbed if he feels that there is apprehension or uncertainty being manifested by the physician. If the patient is agreeable, either the wife or husband, or some close relative or friend, should be asked to sit in on the initial conference. During this conference an explanation should be forthcoming of the nature of the condition with which one is dealing, the way in which control will be approached, and the danger signals which should lead the patient to consult the physician immediately. It is of the utmost importance that the already distraught patient not be subjected to a series of rigid rules for the conduct of almost every phase of his life, nor should he be burdened with a number of books, be they simple or technical, dealing with the disease. If any material is dispensed it should consist of a diabetic identification card

* Presented at the Eighty-third Annual Meeting of the Louisiana State Medical Society, May 8, 1963, in New Orleans.

and a small, common-sense pamphlet written for the layman by several of the drug houses. The patient should be told that if he exerts a few reasonable precautions and uses common sense where his disease is concerned, his life should not be greatly altered nor his activities restricted in any way. Above all, it is extremely important not to use the so-called "fright technique" of telling the patient that if he does not remain in perfect chemical balance at all times, dreadful complications will ensue.

Simple Diet Directions are Advised

As far as the diet goes, I have worked with a number of different types of diabetic diets and have finally decided that for the average patient who is not greatly obese, it is best to discuss diet in simple terms without giving him a diet list to follow, unless the patient specifically requests such a list. I usually tell the patients that they are to avoid concentrated sweets and obviously sweetened foods, increase proteins and reduce fats, thus providing a well-balanced diet. No effort is made to prepare any special foods, and a few simple questions will determine whether or not the patient has a truly abnormal caloric intake. In most patients, as soon as reasonable control is established, the caloric intake will not exceed that of the average person, and, indeed, most diabetics under reasonable control will maintain their weight at a more stable level than the non-diabetic.

Rigid Dietary Regimen Disheartens the Patient

Let us assume that the patient has seen a physician who has laid down a very rigid dietary regimen and threatened the patient with all sorts of dire circumstances should he not remain normoglycemic and aglycosuric. The first mistake made here is that patients requiring insulin for reasonable control can seldom if ever be maintained in such a situation and have any sense of well-being. The diabetic who receives enough insulin to keep him normoglycemic and aglycosuric is close to, if not in, insulin shock most of the time, and certainly will tell the physician that he does not feel well and is markedly lacking in energy.

On leaving the office of his physician, with a rigid regimen, the person who has much of the obsessive-compulsive in his nature will make every effort to toe the line. He will follow his routine rigidly and will be greatly disturbed by small amounts of sugar in the urine, or a slightly elevated blood sugar. Eventually, he will find himself in a situation where he will be totally unable to follow the therapeutic outline, and to his astonishment will find that no dire circumstances have resulted. Thereafter, he will find it easy to slip away from his outlined program. As he gets further away from the controlled situation and continues to find that he feels not only as well but frequently much better, all of his precautions are gradually discarded and he not only pays very little attention to the physician, but has no confidence in what he has been told, and frequently is entirely lost as far as contact with the physician is concerned until such time as he is in dire need of help. The patient who does not have this compulsive tendency will usually look at the diet and outline carefully and then decide for himself that as long as he is doomed he may as well live it up for as long as he is capable of doing so. Astoundingly enough, this patient frequently does very well so long as he takes his insulin, if it is indicated, and he, too, loses confidence in what he has been told. It would seem infinitely better to lay down a basic set of ground rules which allow the patient reasonable freedom and do not greatly alter his routine. Recent work by a number of investigators has shown that the diabetic frequently has the complications of his disease before the disease is clinically apparent. All of us are familiar with the cases referred by the ophthalmologists who have seen the classical berry aneurysms in the fundi of people who have no knowledge that they are diabetics. This only serves to cast further doubt on the hypothesis that rigid chemical and clinical control of diabetes mellitus is going to prevent the development of complications.

Summary

In summary, when one sees a new diabetic, an effort should be made to sit quietly and talk with the patient, asserting oneself in a positive and confident manner, and laying down a very simple set of rules which will allow the patient to continue his normal living pattern and enable the physician to keep a patient and a friend.

Discussion

Douglas L. Gordon, M. D. (Baton Rouge) I would like to first of all thank Dr. Herold for bringing this matter up for discussion as this subject is one that has resulted in many arguments pro and con. The final answer, of course, is not yet known since the statistics regarding the incidence of vascular damage in well controlled vs. freely controlled diabetics are not completely agreed upon. Dr. Herold is to be commended in being able to take this stand with his diabetic patients and maintain them in his own practice in this relaxed fashion. I hope that he may in the future have some statistics of his own to show us with regard to the incidence of vascular damage in these patients. At the present time, however, I disagree with him in several aspects of this program.

Diabetes and Any Chronic Disease Bring Emotional Reactions

It has not been my experience that the present day management of diabetes is complicated nor frightening in most patients. I would certainly agree that an emotional reaction is produced when a patient discovers he has diabetes. However, this is not any different in many ways from the patient who finds out he has tuberculosis, heart disease or hypertension, any one of which would require prolonged management and careful control of medication and diet and may lead to anxiety concerning certain unforeseen complications of these disorders. In my experience, which is not tremendous, but which is a good cross-section of diabetic treatment in Baton Rouge, the usual diabetic patient is the obese adult diabetic who finds out he has diabetes as a result of an annual physical, an insurance examination, or possibly an association with an acute infection or skin disorder. In many instances, these patients have had only mild symptoms and do not seem to be disturbed by the diagnosis of adult or mature-onset diabetes mellitus.

Weight Reduction is Needed for Obese Diabetics

In general, my plan has been to place these patients on a weight reduction diet without the use of insulin or hypoglycemic agents and allow them to test their urine for sugar before breakfast and supper daily. As they follow their weight reduction regimen carefully over the next few days, the gradual disappearance of glycosuria is not only encouraging to them but is also quite informative with regard to the type of food that they should or should not eat. Polyuria, visual disturbances and leg cramps may disappear during this few days. As they then lose weight and the glycosuria disappears completely, a blood sugar test is usually obtained to determine whether they have reached normal blood levels or not. Only in those cases which do not achieve relatively normal blood sugars with good continued dietary restriction and weight loss, are they then given one of the hypoglycemic agents orally or possibly insulin.

In effect, what the physician has done in this case is advise the patient to lose weight, which he should do anyway, pointing out to him that because of his overweight and abnormal condition, he has developed a disease which is possibly reversible by weight loss and a return to a more normal metabolic state. This does not threaten his existence but tends to channel his future activities and health into a much more normal range with possible prolonged life and better health as the result. I could not agree more heartily with Dr. Herold in emphasizing that the physician should be considerate, calm and convincing and should take adequate time with the patient, explaining and discussing any details that should arise. The patient should not be frightened of course.

Dietary Directions are Necessary

With regard to further dietary and insulin control, I think that the patient does need some type of guide or diet list to follow which spells out for him the foods he should choose as well as those he should not choose. He should be told to control his glycosuria to negative or one plus if this is not too difficult to do and it should not be in 85 per cent of the diabetics. I would agree that an extremely rigid attitude would probably drive away many patients and result in self-control and poor management. At the same time, I think that the only good reason that one can adequately offer for not attempting to control a patient well is the possibility of a hypoglycemic reaction. One helpful point that is sometimes used in the brittle diabetic or the diabetic who thinks he is brittle is the use of small amounts of carbohydrate such as in single crackers or cookies at intervals of an hour during the later afternoon to prevent hypoglycemia. If one avoids this fairly carefully then good control with or without insulin and diet as needed should in the long run be less trouble and lead to less anxiety on the part of the physician and the patient. Still further, we certainly do not know the final answer regarding the continued effect of glycosuria and

hyperglycemia on patients. This is particularly true in pregnancy and infections and with regard to the possibility of aggravation of such conditions as diabetic neuritis, peripheral vascular disease, hypercholesterolemia as well as the more symptomatic disturbances as polyuria, weight loss, polyphagia, etc.

Summary

Therefore, in conclusion, I think it would be much better to have a diabetic patient have a goal at least to aim for, even though he may not achieve this. After all, our role as physician is to point out a path for the patient to follow which is, to our knowledge, the best and the most rewarding path. Whether the patient follows this path or not is entirely up to him and should be of secondary concern to us. It should not be of such concern as to make us change our pathway until such time as we have good experimental evidence, statistically evaluated and accepted, which would indicate that either pathway is perfectly safe.

Kefauver Raises Drug Costs?

I spoke with Mr. Kefauver on a program not long ago at the Waldorf-Astoria in New York. I talked about the great accomplishments of medicine and pharmacy here in the United States. Everybody seemed to be quite pleased. Then Mr. Kefauver was called on as the second speaker, and he said: "I would not contradict any of the statements that the doctor has just made but the cost of drugs is too high." How did he know that the cost of drugs was too high? If he had known why the costs of drugs were as high as they are, he would not have passed the law that has just passed, which is going to make the cost of drugs much higher than they have ever been in the past. No one can make the kind of tests that are demanded by the new legislation without adding appreciably to the cost of the drugs.—Morris Fishbein, M. D., at fourth annual New Jersey Pharmaceutical Industry Day, Union, N. J., Oct. 25, 1962.

The Case for the Conservative Control of The Ambulatory Diabetic*

• The author reviews the problems of proper diabetic balance. He comments on the fact that degenerative changes may precede overt manifestations of diabetes. A consistent attempt at adequate control is advised although its attainment possibly may not be achieved.

VAN B. SAYE, JR., M. D.
Baton Rouge

WITH the isolation of insulin in 1921 by Banting and Best, the treatment of diabetes underwent a dramatic change which since that time has been improved by the isolation of insulin in the crystalline form by Abel in 1927 and in 1936 by the demonstration of the prolonged action of insulin by Hagedorn after its combination with protamine. In 1955 the sulfonylurea drugs were first introduced for oral control of mild diabetes. Since that time minor advances have been made in the understanding of carbohydrate metabolism but these have not resulted in dramatic changes in the treatment of diabetes.

Degenerative Changes May Exist with Mild Carbohydrate Abnormality

The finding of neuropathy, retinopathy, and nephropathy in individuals with very mild abnormalities in carbohydrate metabolism has led to the development of a liberal school of thought in control of diabetes first advocated by Tolstoi. The basic reasoning behind this is that at the present time our treatment could not have improved these individuals' carbohydrate metabolism and even at that early date they have developed the degenerative changes characteristic of diabetes. Diabetes is a disease involving many factors other than carbohydrate metabolism. The relative ease in measuring glucose in urine and blood has focused our attention on the abnormality in carbohydrate metabolism.

It has been brought out by Toreson[9] that persistent hyperglycemia and "work exhaustion" cause glycogen deposition in the beta cells of the pancreas. This process has long been known to be reversible by controlling the blood glucose. Definite reversibility of this process by control of the blood sugar affords a strong argument for continued careful regulation of the diabetic patient.

In the past, the absence of a readily recognizable lesion in the pancreas has been a problem in understanding the basic pathology. Rare cases of spontaneous remission of diabetes further complicate the picture. The finding of the absence of insulin in the blood of the juvenile diabetic and the presence of insulin in the blood of the mature diabetic further confuse the picture. Recent studies using immunoassay of plasma insulin reveal elevated levels in maturity onset diabetes, while bioassay studies have revealed reduced levels. This has been interpreted as suggesting circulating antiinsulin substances in the plasma as a cause of maturity onset diabetes.

Degenerative Changes Begin in the Small Arteries

At the present time further basic studies are continuously being made that suggest diabetes mellitus is a symptom complex that may cover a number of different diseases. Apparently they all cause the degenerative changes that begin in small arteries with initial swelling of the endothelium followed by eccentric or concentric proliferation of the cells producing closure

* Presented at the Eighty-third Annual Meeting of the Louisiana State Medical Society, May 8, 1963, in New Orleans.

of the lumen of the vessel. These areas of proliferation resemble the nodules of diabetic glomerular sclerosis and precede the development of micro aneurysms in the retinal vessels. Neuropathy, retinopathy, nephropathy, and arteriosclerotic changes in the large arteries are due to the results of small artery obliteration.

Diabetic Retinopathy is Common

Diabetic retinopathy is rapidly becoming the most common cause of blindness in our country. Almost 80 per cent of juvenile diabetics of five years duration have retinal changes but only about 17 per cent of these have severe enough degeneration to produce visual impairment. Almost all individuals with the severe changes have had poor control either due to the nature of their diabetes or to neglect. Brittle diabetics usually are poorly controlled and have the most retinal degeneration. In these patients careful control must be attempted by the physician.

Diabetic Neuropathy

Neuropathy also occurs in a large number of juvenile diabetics after five or more years duration. Correlation with control of the diabetes is less marked than with retinopathy but is nevertheless present. The development of absent ankle reflexes after a period of poor control is commonly noted. Neuropathy may occur during periods of good control and may be the presenting symptom of diabetes. Stress situations occurring during the course of diabetes may precipitate neuropathy. Treatment of neuropathy is usually unrewarding although many drugs have been advocated. In general, severe neuropathies occur in poorly controlled diabetes.

Nephropathy

Diabetic nephropathy is of great interest because the nodular lesion of nephrosclerosis or Kimmelsteil-Wilson is the only real pathologically diagnostic lesion present in diabetes. This lesion has been found in prediabetic patients and instances of renal failure due to diabetic nephropathy occur in cases with only mild changes in carbohydrate metabolism. It is generally felt that control of diabetes has no effect on this process. Diabetes is a many sided metabolic defect of which vascular damage and carbohydrate defect are but two components. In some patients the vascular damage may be the major defect.

The early development of coronary arteriosclerosis in diabetes is also generally felt to be poorly correlated with control.

Intercurrent Infections

Control of diabetes can be best correlated with prevention in the field of infections of the skin and urinary tract. Female diabetics especially develop more urinary tract infections when poorly controlled. Prevention of chronic pyelonephritis and subsequent renal failure on that basis should certainly be attempted. Poor control of diabetes and poor foot care lead to fungous infection of the feet and superimposed cellulitis resulting in many cases in amputation of the extremity. Adequate care in many cases can postpone the development of gangrene. In control of diabetes we cannot dismiss the minor problems which can become more serious with neglect.

Attempt at Proper Diabetic Balance is Necessary

Much is presently unknown in the understanding of the pathological chemical changes in diabetes but with our present experience most physicians feel that control of dietary intake of carbohydrates and the use of insulin if adequate blood sugar levels are not obtained by diet is basic in the control of diabetes.

In brittle diabetics what we consider adequate control is not possible in many cases. The development of a philosophy in this patient that adequate control is of no value will certainly lead him to lose interest in keeping a control on his diabetes and in the long run will lead to more expense and probably a shortened life expectancy. It is my impression that almost all physicians try to control diabetes by dietary measures, insulin, or the sulfonylurea drugs. Only in those cases where the type diabetes prevents adequate control does the physician's philosophy enter the

clinical management. This same reasoning enters into the treatment of all conditions in which we have inadequate knowledge.

Case of Juvenile Diabetics

In juvenile diabetics the prevention of diabetic acidosis is not possible unless an attempt is made to adequately control the patient. Even under optimal conditions this is not always possible. The constant changes in the amount of insulin needed may be very perplexing. Infection and other factors not yet clear drastically affect the control. That more insulin is not always the answer to control has been brought out by Somogyi.[10] Depression of the blood sugar to low levels may lead to subsequent elevation in the blood sugar level and a vicious cycle develops leading to greater difficulty in management. These problems have to be handled individually and require clinical experience. The problem is lifelong in the diabetic.

Diabetes Influences Fetal Mortality

In prediabetics and in diabetics the elevated fetal mortality rate continues to be a problem. Control of diabetes will reduce but not prevent this complication. Early degeneration of the placental vasculature as a cause of fetal death is well documented and early delivery is advocated. Hyperglycemia and excessive growth hormone are thought to be cause of gigantism. Control of hyperglycemia is thought to reduce high birth weight, hypertrophy of the pancreatic islet tissue and increased extra medullary hemopoiesis. Adequate control, however, does not prevent all complications as prediabetics present some of the problems listed above.

Criteria for Control

The criteria for adequate control of a diabetic patient include maintenance of optimum weight, avoidance of hypoglycemia, a sense of well being, and a blood sugar within the normal range of 100-160 mg./100 ml by the Folin-Wu method. The presence or absence of glycosuria may or may not be helpful depending on the renal threshold of glucose. The avoidance of ketonuria is not mentioned as this will occur when the above criteria are met.

Generalizations

Some generalization can be made in the management of diabetics. Usually the young diabetic is a real problem in management as diabetic acidosis is prone to develop even under good management with infections. This is commonly seen in children and their management presents many problems. Middle-aged obese diabetics can be controlled by diet alone in most cases if weight reduction is obtained.

Middle-aged and elderly diabetics of normal weight are adequately controlled by the sulfonylurea drugs in many cases and at the present time this is the ideal indication for the use of these drugs.

Summary

For several decades after the introduction of insulin it was generally believed that adequate control of diet and insulin would result in adequate control and prevention of the degenerative changes characteristic of diabetes. This has not proven to be true. Nevertheless, at present we should strive for control as it does slow many of the degenerative complications and leads to a happier and healthier life for the diabetic patient. It is to be hoped that advances in our basic knowledge of diabetes will result in prevention of the degenerative changes characteristic of diabetes mellitus.

References

1. Blumenthal, M. A. and Goldenberg, S.: Anonatheromatous Proliferative Vascular Lesion of Retina in Diabetes Mellitus. Role in Etiology of Diabetic Retinopathy, Am. J. Med. 31:382, Sept., 1961.

2. Collyer, R. T. and Hazlett, B. E.: Retinopathy and Neuropathy in 100 Growth-onset Diabetic Patients, Canad. M.A.J. 85:1328, December 15, 1961.

3. Daysog, D., Dobson, H. L. and Brennan, J. C.: Renal Glomernlar and Vascular Lesions in Prediabetes and in Diabetes Mellitus: Study Based on Renal Biopsies, Ann. Int. Med. 54:672, April, 1961.

4. Ellenberg, M.: Diabetic Complications without Manifest Diabetes, J.A.M.A. 183:11:926, March, 1963.

5. Ellenberg, Max: Diabetic Neuropathy, Consideration of Factors in Onset, Ann. Int. Med. 52:1067, May, 1960.

6. Gunderson, K. and Williams, R. H.: Insulin Antagonism in Serum of Untreated Diabetics and in Previously Treated Diabetics with Keto Acidosis, Prac. Soc. Exper. Biol & Med. 105:390, November, 1960.

7. Hines, J. J. and Kessler, D. L.: Unexplained Remission of Long-standing Severe Diabetes Mellitus,

Ann. Int. Med. 55:314, August, 1961.
8. Pedersen, J and Osler, M.: Hyperglycemia as Cause of Characteristic Features of Fetus and Newborn of Diabetic Mothers, Danish Med. Bulletin 8:78, June, 1961.
9. Toreson, W. E.: Glycogen Infiltration (So called Hydropic Degeneration) in Panereas in Human and Experimental Diabetes Mellitus, Am. Journ. Path. 27:327.
10. Somogyi, M.: Exacerbation of Diabetes by Excess Insulin Action, Am. Jour. Med. 26:169, February, 1959.



The Truth About Side Effects

It would be difficult to name a major drug with no side effects . . . no response other than that for which it is prescribed. Sometimes side effects may be beneficial. More often, they are merely undesirable. In some instances, they may be serious enough to force the physician to choose whether the therapeutic value of the drug more than offsets the unwanted reaction. But again, this is essentially a matter of professional judgment. The responsibility of the manufacturer is to do everything possible to minimize unwanted reactions. And at the same time, he is absolutely obligated to provide full information about a product, so that the doctor can make his own professional judgment in the treatment of patients.—John T. Connor, President, Merck & Co., to American Hospital Association, Sept. 18, 1962.

Giardial Duodenitis: Clinical Manifestations of Giardiasis In Children (Report of Three Cases)

• Clinical and radiographic manifestations of giardiasis are discussed. These illustrative case histories are given. The importance of differential diagnosis is shown. The problem of treatment is simplified.

LLOYD A. McLAUGHLIN, JR., M. D.
New Orleans

ABDOMINAL pain and tenderness are very frequently elicited signs and symptoms. When the abdomen of a child is involved, there is an added diagnostic concern, since in many cases, one cannot be dogmatic with equivocal laboratory or dubious clinical findings.

Recently, three such patients were encountered who presented abdominal complaints and when evaluated were found to be due to the intestinal flagellate Giardia lamblia.

Case Reports

Case I. (C. M. 9 yr. WF) Presented with abdominal pain, distention and blurred vision. Nausea, flatulence and irritability were symptoms which were also elicited. Positive physical findings included bilateral tenderness in the flanks and in the mid-epigastrium just superior to the umbilicus. The total leucocyte count was 8,540, with 63 per cent neutrophiles and 2 per cent eosinophiles. Gastrointestinal series and small bowel study showed a normal esophagus and stomach. The duodenal bulb was initially spastic and following a delay the bulb visualized and showed no constant deformity of definite ulceration. The mucosal folds were slightly prominent which may be due to duodenitis. The remaining small bowel appeared to be within normal limits. A delay in gastric emptying was noted which was more than usual and may have been due to an element of pylorospasm. Giardia cysts were found in the stool. Atabrine tablets 0.1 gm. three times daily for five days were prescribed. Starting the day following the discontinuation of the Atabrine therapy, a transient five day yellow skin cast was observed which cleared completely. Stool examination was negative in two weeks and she has had no abdominal complaints for the past five years. (See Figure 1)

Case II. (J. D. 11½ yr. WM) Complained of epigastric pain, nausea, vomiting and temperature 101° F. Over the past three preceding years, he had similar symptoms some including loose stools, and lasting two to three days, which were relieved by control of diet, antispasmodics or antibiotics and bed rest.

Physical examination revealed tenderness in the lower half of the abdomen and seemingly he was most tender in the right lower quadrant. The total leucocyte count was 6,500 with 45 per cent neutrophiles, and 2 per cent eosinophiles. A repeat complete blood count in twelve hours showed a total of 4,500 leucocytes with 48 per cent neutrophiles and 1 per cent eosinophiles. A gastrointestinal series revealed normal esophagus and stomach. The duodenum showed mucosal folds within the bulb and descending duodenum to be very prominent and apparently edematous but no definite ulceration was visible. The mucosal folds in the proximal jejunum also appeared edematous. An attempt to study the small bowel was made but a film made approximately thirty minutes after the upper gastrointestinal study showed the major portion of the barium within the ascending and transverse colon and some had already reached the sigmoid. Stool examination yielded three to seven Giardia cysts per high power field. Treatment was with Atabrine 0.1 gm. three times daily for five days. Repeat stool specimen examined in two weeks was negative and a repeat gastrointestinal series showed a normal esophagus and stomach. There was no spasm of the duodenal bulb and no hypermotility evident in the small bowel. The mucosal folds of the duodenum and jejunum were not as prominent. This was thought to be due to a decrease in the degree of edema or to its absence. In general, the appearance was more nearly normal than that noted on the previous

* Presented at the Eighty-third Annual Meeting of the Louisiana State Medical Society, May 8, 1963, in New Orleans.

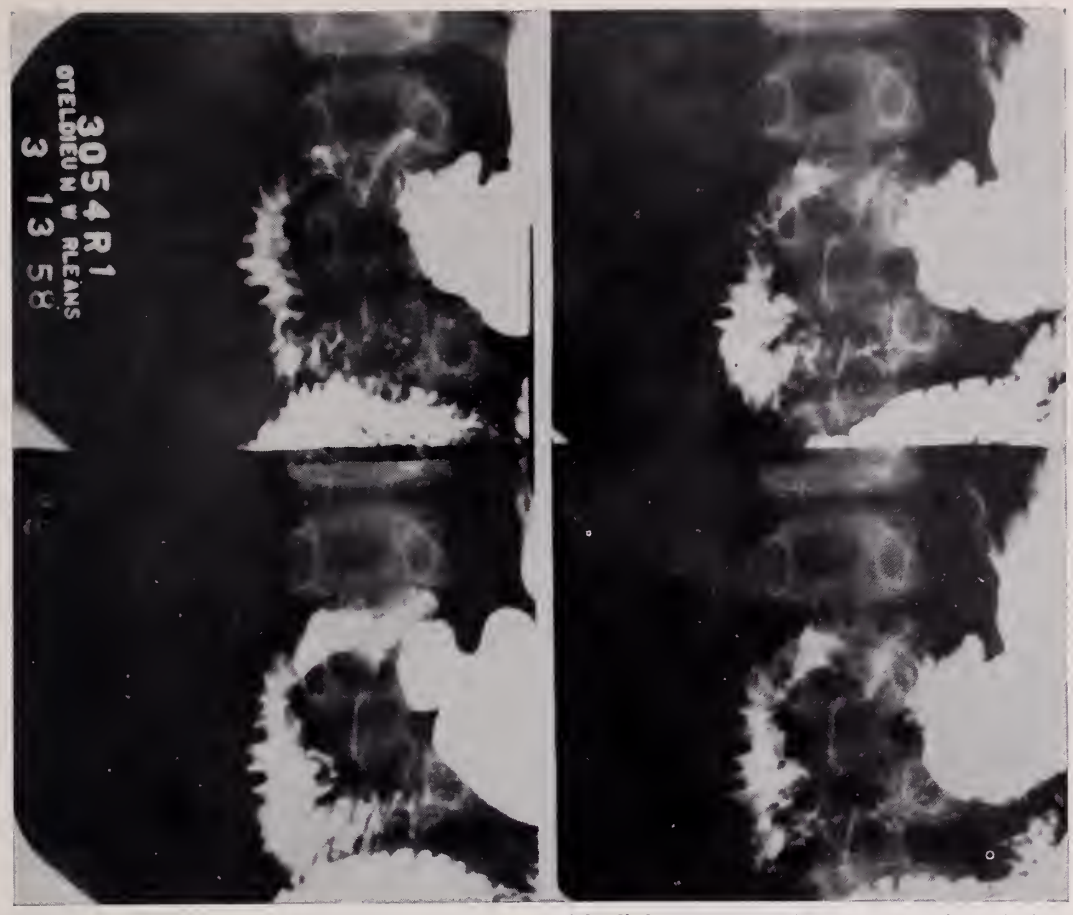


Figure 1. Slight irritability of the duodenal bulb with slight mucosal edema and minimal irritability of the descending limb of the duodenum.

study. No recurrence of symptoms has occurred in the past three years. (See Figure 2)

Case III. (J. R. 5 yr. WF) Presented with nausea, vomiting and generalized malaise. Epigastric pain and generalized abdominal tenderness was found. Total leucocyte count was 5,300 with 42 per cent neutrophiles, and 0 per cent eosinophiles. Gastrointestinal series revealed a normal esophagus and stomach. There was no pylorospasm and the duodenal bulb filled satisfactorily showing no deformity, ulceration, irritability or tenderness. The duodenal loop appeared normal as did the small bowel pattern and the delayed studies showed normal motility. Stool examined showed five to seven Giardia cysts per high power field. She was treated with Atabrine as above. Stool rechecked in one month showed no Giardia cysts and she has been clinically well for the past three years.

Process of Infestation

The protozoan Giardia lives chiefly in the small and, more rarely, in the large intestine,[1] and has been known since Leeuwenhoek described it in his own stool in 1675. Lambl, in 1859, redescribed it and named it Cercomonas intestinalis. In 1915, Stiles renamed it Giardia lamblia.[6]

Giardia lamblia is disseminated in the cystic form.[6] The cysts are not found constantly and may be absent from stools for periods up to ten days. Infestation takes place by ingestion of cysts with drinking water or contaminated food: the cysts pass through the stomach unchanged and in the duodenum, the vegetative forms appear and are fixed in the mucosa. This elective localization of the Giardia accounts for many points of the symptomatology. Duodenal intubation will reveal vegetative forms even in the absence of evolutive stages of the affection. Latent forms of Giardia lambia infestations are extremely frequent and it is necessary to eliminate any other affections and other

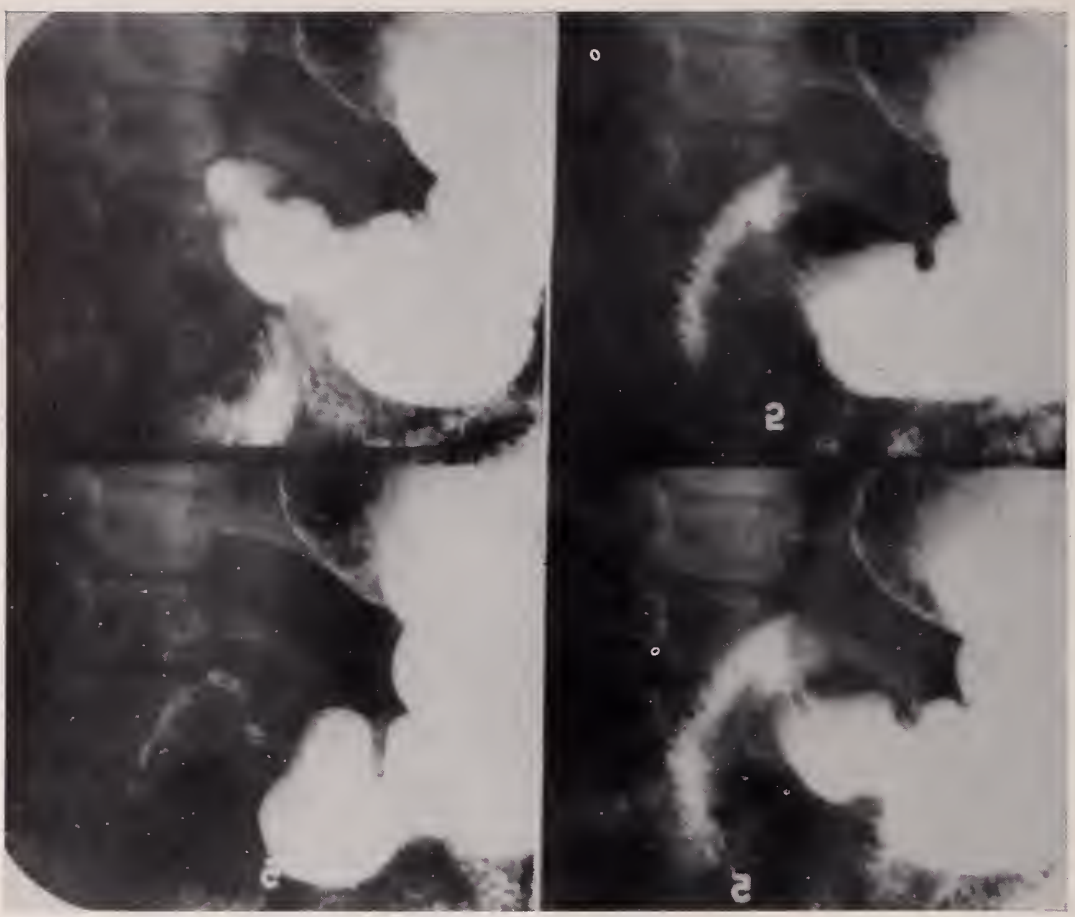


Figure 2. Lack of filling of the duodenal bulb with prominence of the mucosal folds. Fluoroscopy revealed irritability of the bulb and descending duodenum.

associated parasitoses before attributing symptoms to the presence of Giardia. The pathogenicity has been questioned but it has been found to be an inhabitant frequently of the duodenum and jejunum and probably the biliary tract.[6]

Clinical symptoms can be truly attributed to the infestation only if the parasites are found to be in the stools or vegetative forms are demonstrated in the duodenal aspirate and if proper treatment controls the symptoms, and at the same time eliminates the parasites.[1]

The incidence of Giardia lamblia is uncertain. Meleney, Bishop and Leathers, in Tennessee found 14.7 per cent of 20,000 individuals examined infected while Faust and Headlee in 4,000 ambulatory clinic patients in New Orleans found 16.6 per cent infected.[7] It is evident from these figures that this flagellate is by far the most common intestinal flagellate inhabiting the human intestine.[7]

Clinical Syndrome

The syndrome of giardiasis is generally one of chronic diarrhea, persisting for months or even years, and refractory to the usual symptomatic treatment. The stools are soft, and are generally expelled without colicky pain. Gross blood and mucus are usually absent, but Webster,[6] found 21 patients out of 32 with giardiasis had positive test for occult blood in their stools.

The general condition is little impaired and usually excellent. The appetite is preserved. Veghelyi[5] in 1940, contended that severe Giardia infestations may act as a barrier to absorption from the small bowel leading to the celiac syndrome. Katsampes et al.,[8] in 1944, noted that vitamin A ab-

sorption in the intestines was disturbed in cases of giardiasis.

Some epigastric cramps, abdominal distention, cecal gurgling sounds and some tenderness to deep palpation may be present.[1] The blood picture is normal, without eosinophilia.[1]

The duodenitis form is accounted for by the elective localization of the Giardia, but the symptoms of true duodenitis are not frequently observed.[1] Cattan[1] reported duodenitis in only four of 23 cases and Webster reported 11 patients out of 32 had either duodenitis or pylorospasm. The roentgenologic signs of duodenitis in the form of thickening and succulence of the duodenal folds and pseudo-polypoid pictures are rarely encountered; purely functional aspects are dealt with, disappearing with the usual pharmacodynamic tests.

Since giardiasis may coexist with other intestinal parasitoses, frequently amebiasis, it is important to know that certain cases of so-called post-amebic colitis may be due to the fact that the co-existing Giardia infestation has resisted the antiamebic treatment and continues to be the cause of diarrhea or intestinal disturbances.

Treatment

The only effective treatment according to Cattan is quinacrine (Atabrine®). Three doses of 0.1 gm. are given for five days. A single treatment series may be sufficient but it is suggested by Cattan to be prudent to repeat treatment after an interval of two weeks.[1] Faust[7] suggests that Atabrine 0.05 gm. twice daily for not more than three days be given in the case of small children. No contraindications were encountered except that Hartman[3] et al., claimed that Latin American physicians state that advanced hepatic disease definitely contraindicated the use of the drug. Yellow discoloration of the skin usually appears on the second or third day of therapy and is due to the staining properties of Atabrine in the tissues and not to a disturbance of liver function. This is not serious and subsides spontaneously.[4] Hartman et al. reported Atabrine 97 per cent effective in eradicating Giardia from the intestinal tract and it prompted them to say that because Atabrine may be considered a specific remedy for giardiasis much progress may be expected in the study of the pathogenicity of giardiasis.

Acranil® is reported by Faust to be more effective than Atabrine and is nontoxic. Each tablet contains 0.5 gm. and the dose is ½ tablet a day for children under two years of age to three tablets a day for individuals over ten years of age. Usually four to five days treatment is sufficient to cause the elimination of the parasite.

Webster[6] reported cures in four patients treated with Camoquin® or Amodioquin® hydrochloride. The plan of treatment was three 0.2 gm. tablets daily for one day. No untoward side effects appeared.

Discussion

This paper is being presented with the idea of stimulating interest in the continued use of stool examination and gastrointestinal studies for those vague abdominal complaints in children. The stool examination should be made on a freshly passed stool and it must be remembered that the motile trophozoites are found only in liquid or semi-solid stools or duodenal aspirate and that only cysts are found in formed stools. The three cases presented all had nausea, the third case had vomiting as a frequent symptom. Diarrhea was present only in Case II and blurred vision and headaches in Case I. The blood count was normal, without increase in eosinophiles, and in two of the three cases duodenitis was noted.

Atabrine effectively removed the Giardia parasites from the stool and the children's symptoms were relieved concomitant with the removal of the Giardia. Side effects of treatment were negligible and results gratifyingly satisfactory.

Summary

Three cases of intestinal giardiasis, two of which showed roentgenologic evidence of duodenitis are presented. The clinical manifestations and roentgenologic fea-

tures are discussed and the importance of stool examinations in chronic and acute gastroenteritis is stressed.

References

1. Cattan, Roger: The Parasites of the Small Intestine, La. Presse Medicale, 64:698 (April 14) 1956.
2. Berberian, D. A.: Treatment of Lambliasis with Acranil®, American Journal of Tropical Medicine, 25: 441 (September) 1945.
3. Hartman, Howard R. and Kyser, Franklin A.: Giardiasis and Its Treatment. A Clinical Study, Journal of American Medical Association, 116:2855 (June 28) 1941.
4. Hall, Angustus A.: Treatment of Giardiasis, Ohio State Medical Journal, 36:514 (May) 1940.
5. Veghlyi, Peter V.: Giardiasis, American Journal Diseases of Children, 58:793 (April) 1940.
6. Webster, B. H.: Human Infection with Giardia Lamblia, American Jonrnal Digestive Diseases, New Series 3, No. I, 64-71 (January) 1958.
7. Craig and Faust: Clinical Parasitology, Lea and Febiger 1951, 5th Edition, 142-147.
8. Katsampes, C. P., McCoord, A. B. and Phillips, W. A.: Vitamin A Absorption Test in Cases of Giardiasis, American Jonrnal Diseases of Children, 67:189, 1944.

Discussion

Julian H. Sims, M. D., Metairie—I want to thank Dr. McLaughlin for asking me to open the disussion of his paper. In giardiasis the informed radiologist may be in a position to provide the solution to an otherwise obscure problem. Since I am a radiologist I will confine my remarks to the radiographic picture of this disease. I would like to mention briefly the findings in other parasitic infestations of the intestinal tract as well.

In giardiasis the usual picture is one of duodenitis manifested by spasm and irritability of the duodenal bulb and duodenal loop with enlarged, edematous mucosal folds. The changes vary in intensity from a near normal appearance to pronounced change. Giardiasis may also produce hypermotility of the small bowel associated with segmentation and flocculation. These changes are not specific and are produced by a wide variety of pathologic conditions. It must be clearly understood that such demonstrable radiographic changes are not present in all cases. A normal radiographic study does not exclude the disease and, in fact, occurs more commonly than the abnormal study.

In regard to roundworm, hookworm and tapeworm infestations similar changes of hypermotility, flocculation and segmentation have been described. They are not commonly demonstrated nor are they pathognomonic. Of course, we are all familiar with direct visualization of the roundworm, Ascaris, which occasionally occurs and of the rather specific changes produced in amebiasis.

We see, then, that the radiographic changes produced in giardiasis and the other parasitic infestations are non-specific and not uniformly present. The picture, when present, may serve as a clue to the proper diagnosis. Because of the nature and degree of the abnormality, specific search for the changes must be made during the examination by the radiologist. This points to the need and importance of active consultation between the pediatrician and radiologist if the needs of the patient are to be served. It is only through such cooperation that a specific diagnosis of significant giardial infestation is likely to be made.

As Dr. McLaughlin points out in his paper, the gastrointestinal examination can be an important aspect in the work up of a pediatric patient with vague abdominal complaints. Its usefulness and productivity will vary directly with the interest of the radiologist and the degree of consultation between him and the pediatrician.

Hang Together—or Else

It will be only by constant vigilance and by constant public education that a climate of competitive private enterprise, a climate nurturing incentive with the profit motive, can be maintained in both medicine and the drug industry. Both groups have so much in common in the struggle to prevent strangulation by Federal bureaucracy that it behooves each to support the other.—John S. DeTar, M. D., in **Medical Economics**, Jan. 28, 1963.

The Journal of the Louisiana State Medical Society

Established 1844

Published by The Journal of the Louisiana State Medical Society, Inc. under the jurisdiction of the following named Journal Committee:

George H. Hauser, M. D., Ex-Officio
J. E. Knighton, M. D., Chairman
Sam Hobson, M. D., Secretary
A. V. Friedrichs, M. D.
H. H. Hardy, Jr., M. D.
M. D. Paine, Jr., M. D.

EDITORIAL STAFF

PHILIP H. JONES, M. D., Editor

COLLABORATORS—COUNCILORS

Nicholas J. Chetta, M. D.
J. E. Clayton, M. D.
Guy R. Jones, M. D.
C. E. Boyd, M. D.
Frederick A. Marx, M. D.
John L. Beven, M. D.
J. Y. Garber, M. D.
R. E. C. Miller, M. D.

C. GRENES COLE, M. D., General Manager
1430 Tulane Avenue

Subscription Terms: $4.00 per year in advance, postage paid, for the United States; $5.00 per year for all foreign countries belonging to the Postal Union.

News material for publication should be received not later than the eighteenth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

Manuscripts should be addressed to the Editor, 1430 Tulane Ave., New Orleans, La.

The Journal does not hold itself responsible for statements made by any contributor.

Owned by Louisiana State Medical Society. Average circulation preceding 12 months 3,284. (Statement in accordance with Postal Manual Section 132; 624, e).

Editorial

Drug-Induced Diabetes

Recent observations indicate that the benzothiadiazine derivatives may show a diabetogenic activity in some patients. Chlorothiazide was the first of this series of benzothiadiazine derivatives and was introduced into medical practice as a diuretic in 1958.

Similar drugs with basically similar features have been developed. They are in wide use as diuretics and hypertensive agents. It is unusual in medical practice that a drug can be regarded as a precipitating factor in the development of diabetes. In the past five years several authors have drawn attention to the development of diabetes in connection with the administration of the benzothiadiazine derivatives (BZD).

Finnerty[1] in 1959 made observations concerning the possible effects of these compounds on carbohydrate metabolism. Goldner[2] in 1960 reported hyperglycemia and glycosuria due to thiazide derivatives administered in diabetes mellitus.

Shapiro et al[3] studied glucose tolerance and the response to intravenously administered tolbutamide in a group of elderly hypertensive subjects without clinical diabetes. Observations were made before and during the administration of thiazide drugs in therapeutic doses. It was found in subjects with "potential diabetes", as determined by family history and previous glucose tolerance test that a further impairment of carbohydrate metabolism usually developed, and in some clinical diabetes was precipitated. Significant changes were not noted in "non-diabetic controls".

Runyon[4] investigated the response to intravenously administered tolbutamide in a group of patients with mild diabetes. This was before and after a BZD derivative was administered. He found that the thiazide compounds regularly influenced the diabetic control adversely during administration in large doses, less regularly in small doses.

Hollis[5] reported on the aggravation of

diabetes in mother and daughter during treatment with chlorothiazide. Observations by these authors were on subjects who had mild diabetes, or who because of family history or glucose tolerance response should be regarded as "prediabetics".

A recent paper by Wolff,[6] et al presents the thesis that "chronic administration of BZD has diabetogenic activity, not only in patients already intolerant to carbohydrates and with a family history of diabetes, but also in hypertensives who appear initially free of any stigma of diabetes and prediabetes". These observations were made in a study over some years on the effects of hypotensive treatment in cases of essential hypertension. This was a "double blind study". Seventy one patients were reported upon. Twenty six patients were not given BZD and 45 were. The family history of diabetes was approximately the same in the two groups. The mean fasting blood sugar in the group given BZD was 97 mg. per cent. This excluded two patients in whom frank clinical diabetes developed. The mean fasting blood sugar value in the group not receiving BZD was 88.4. In none of these patients did clinical diabetes develop. The difference is regarded as statistically significant. These figures are the mean of all those recorded during 1961 to 1964.

In the group not given BZD 7.7 per cent of the group were found with at least one fasting blood sugar value over 110. In the group receiving BZD the corresponding figure was 33.3. The authors also reported on five patients not included in this series mentioned above. Two of these had diabetes when BZD was started. Three developed it while it was being administered. The five patients improved after discontinuation of BZD. In two of the five it was possible to stop the diabetic therapy. Eventually gradual deterioration was seen. Two of the patients were known to have normal carbohydrate tolerance prior to the onset of the study with no family history of diabetes. In these two BZD caused diabetes. This was temporarily relieved by antidiabetic therapy. The author states that permanent damage to the glycostatic mechanism seems to have occurred. The means by which BZD damages the diabetic mechanism and produces hyperglycemia and glycosuria are not known.

The dose of the drugs was as follows: chlorothiazide 0.5 gm. was given twice a day; hydrochlorothiazide 25 mg. four times a day.

The authors consider that attention should be given to the diabetogenic activity of BZD administered over prolonged periods. They comment that the presence of a family history of diabetes and obesity are not essential for the development of this syndrome. There is a possibility that an individual being treated with BZD derivatives may decline in health and strength because of the unsuspected development of diabetes. This may be easily overlooked while the polyuria is being regarded as a diuretic effect and the rapid decline in strength may be attributed to electrolyte loss.

"Presently reported studies suggest that BZD should not be given to young or middle-aged hypertensives in whom there is a lengthy life expectancy, or in whom the need for any hypotensive therapy is not clearly established".

This investigation points out the danger of prolonged use of BZD derivatives when they are administered in full therapeutic dosage. Diabetogenic effect is less when small doses are used. Concern of the clinician will continue over whether the prolonged use of moderate doses may not be as dangerous as shorter term use of full therapeutic doses. Further study in this field is needed.

1. Finnerty, F. A.: "Special Problems in Therapy of Hypertension, Discussion, in Hypertension: First Hahnemann Symposium on Hypertensive Disease, J. H. Moyer, ed, Philadelphia, W. B. Saunders Co., 1959, p. 653.

2. Goldner, M. G.; Zarowith, H.; and Akgun, S.: "Hyperglycemia and Glycosuria due to Thiazide Derivatives Administered in Diabetes Mellitus", New England J. of Med., 262; (Feb.) 1960, 403.

3. Shapiro, A.; Benedek, T.; Small, J.: "Effect of Thiazides on Carbohydrate Metabolism in Patients with Hypertension", New England J. of Med., 265; (Nov.) 1961, 1028.

4. Runyan, John W. Jr.: "Influence of Thiazide Diuretics on Carbohyrate Metabolism in Patients with Mild Diabetes", New England J. of Med., 267 (Sep.) 1962, 541.

5. Hollis, W. C.: "Aggravation of Diabetes Mellitus During Treatment with Chlorothiazide", JAMA 176: 947, (June) 1961.

6. Wolff, F. W.; Parmley, W. W.; White, K.: "Drug-induced Diabetes", JAMA 185: 568, (August) 1963.

Urgent Support for AMPAC-LAMPAC

The ability of the physician to maintain his position in the unpredictable interplay of forces in our socio-economic makeup depends upon the effectiveness of his organization. This in turn derives its strength from the financial support, the personal influence, and the political effectiveness of the physician's political organization.

The medical organizations which were established for professional and educational purposes are forbidden by law from taking any partisan stand, or giving financial support in the partisan phases of politics. The physician's ultimate welfare, therefore, lies with a medical organization which is essentially political and under no restrictions, such as those mentioned above.

Within the last two years, the American Medical Political Action Committee (AMPAC) has been formed by our national medical leaders, and has functioned effectively in the elections which were held in the fall of 1962. Also in the last two years, the Louisiana Medical Political Action Committee (LAMPAC) has similarly formed and functioned creditably in the elections of last fall.

During the next twelve months there is going to be a mighty struggle for political dominance in the field of medicine. The administration has had to side track the King-Anderson bill during the present year, but in the preparations for election it will be again presented by the administration and supported by every political device known.

It is our aim to prevent its passage. AMPAC and LAMPAC are planning strenuous opposition, and anticipate difficulties. This situation can only be met with proper use of money and influence. Both of these the physicians must supply.

Your officers and members of the board of directors of LAMPAC urge that the members pay their 1963-64 dues now, and that those who are not members join now. Dues for the year are $25.00. The need and the expenses are greater than this amount will supply. The organization is in a position to accept up to $109.00 a year as a sustaining membership. The check should be made payable to LAMPAC and sent to LAMPAC headquarters, Suite 202 Medical Center, 4550 North Boulevard, Baton Rouge, La. 70806.

The future of medicine depends upon how well this organization is supported.

ORGANIZATION SECTION

The Executive Committee dedicates this section to the members of the Louisiana State Medical Society, feeling that a proper discussion of salient issues will contribute to the understanding and fortification of our Society.

An informed profession should be a wise one.

IMPORTANT REMINDER

This is a reminder to all Component Parish Medical Societies that the medical profession must complete its organization to fight the passage of the King-Anderson Bill H.R. 3920, the proposed Kennedy Medical Care Bill for the Aged under the Social Security System. We should be thoroughly prepared to oppose this legislation by every means at our command when this bill comes up for a hearing before the House Ways and Means Committee. You can rest assured that the proponents of this measure will no doubt intensify their campaign in support of this bill as soon as the time of this hearing is announced and at the hearing.

We would recommend that the "Operation Hometown" program, the blue print for guidance of parish society action designed to present Medicine's views against the passage of the King-Anderson legislation proposed in Washington, be completed and readied for complete implementation as soon as a hearing date is scheduled. Our "Operation Hometown" committees should be strongly organized and maintained to oppose the passage of H.R. 3920 and any other legislation which is proposed against the free enterprise practice of medicine as we have known it and practiced it in the past. Let us fight for our rights. Now is the time. It will be too late after the bill is passed.

We have admittedly strong opposition from the Kennedy administration but, we have the people with us if we can only get their message over to our Senators and Congressmen. Won't you please put forth your best efforts to successfully implement this "Operation Hometown" program? Only in this way can we get the medical profession organized to defeat this most objectionable and damaging legislation.

Should any parish society or committees wish assistance in the implementation of this program or otherwise, please be assured that we, at the Headquarters Office, will be only too glad to be helpful.

AMPAC-LAMPAC NEED PHYSICIANS' SUPPORT

The officers and members of the Board of Directors of LAMPAC wish to thank all those members of the Louisiana State Medical Society who are members of AMPAC-LAMPAC and wish to remind them that their 1963-64 dues are now payable. It appears that the King-Anderson bill may have been sidetracked at this time in Washington, due to the pressing civil rights and tax cut bills now before Congress. However, the President has promised an all-out fight in the election year of 1964 to pass the socialized medicine act. We would like to urge all those who are not members to please join as soon as possible. Checks should be made payable to LAMPAC for $25.00 to $109.00 (sustaining membership) and forwarded to your district representative or directly to LAMPAC Headquarters in Baton Rouge, Suite 202 Medical Center, 4550 North Boulevard. We believe that it is imperative that every member of the Louisiana State Medical Society become a member of AMPAC-LAMPAC in order to preserve Free Medicine in America.

BASIC STATEMENT ON TETANUS IMMUNIZATION

The American Medical Association is establishing an intensive and continuing campaign to improve the immunization of the American people against tetanus. This program will start in September 1963, and will consist of public and professional education urging the public to get, and renew, inoculations with tetanus toxoid.

Tetanus, formerly called "lockjaw," is completely preventable. The armed services, who provide tetanus immunization routinely, rarely have a case. During recent years an average of 400 cases annually have occurred in the United States. About sixty per cent of those afflicted have died. All of these deaths were unnecessary.

The death rate from tetanus is highest among children. Emphasis therefore should be placed on inoculating them in infancy. Usually this is done with "triple vaccine," including diphtheria and whooping cough along with tetanus toxoid. Three injections four weeks apart, and a booster dose within 6 to 12 months, will establish immunity.

After immunity has been established, everyone should maintain protection by booster doses every five years, and a similar booster dose after any injury that might cause tetanus. If immunity has not been established in infancy, an original series of three injections should be given at any age, and similarly followed by booster doses.

Tetanus toxoid is an extremely effective preventive, and it is not known to produce serious side effects. The tetanus antitoxin, on the contrary, occasionally produces serious reactions in

people allergic to horse serum. It is now used only for treatment of persons who have failed to get advance inoculations with toxoid. Both tetanus and the danger of allergic reactions can be avoided by preventive inoculations with tetanus toxoid, before injury.

Even trivial puncture wounds permit the entrance of tetanus bacteria. The tetanus organism is commonly found in the soil. Out-door living, gardening and sports make everyone eligible for infection. The bacilli grow in the absence of air, and this is why puncture wounds are particularly liable to produce the disease. Automobile accidents and the disasters for which we prepare in civil defense also produce injuries subject to tetanus contamination. Immunization with tetanus toxoid before injuries happen is the only effective protection.

Many adults are unaware of their need for periodic booster shots. Each physician should urge his patients to be immunized and to regularly renew protection against tetanus. A high level of immunity in the population can reduce the present needless occurrence of deaths from tetanus. The American Medical Association urges medical societies and appropriate health agencies to accelerate their efforts in the prevention of tetanus.

MEDICAL NEWS SECTION

CALENDAR

PARISH AND DISTRICT MEDICAL SOCIETY MEETINGS

Society	Date	Place
Ascension	Third Tuesday of every month	
Calcasieu	Fourth Tuesday of every other month	Lake Charles
East Baton Rouge	Second Tuesday of every month	Baton Rouge
Jefferson	Third Thursday of every month	
Lafayette	Second Tuesday of every month	Lafayette
Lafourche	Last Tuesday of every other month	
Morehouse	Third Tuesday of every month	Bastrop
Natchitoches	Second Tuesday of every month	
Orleans	Second Monday of every month	New Orleans
Ouachita	First Thursday of every month	Monroe
Rapides	First Monday of every month	Alexandria
Sabine	First Wednesday of every month	
Tangipahoa	Second and fourth Thursdays of every month	Independence
Second District	Third Thursday of every month	
Shreveport	First Tuesday of every month	Shreveport
Vernon	First Thursday of every month	

SEVENTEENTH ANNUAL SCIENTIFIC ASSEMBLY LOUISIANA ACADEMY OF GENERAL PRACTICE

The Louisiana Academy of General Practice will hold its Seventeenth Annual Scientific Assembly at the Capitol House in Baton Rouge on October 15-17, 1963, it was announced by Dr. Santo E. Taormina of New Orleans, LAGP Secretary.

On the evening of October 14, preceding the opening of the Assembly, Academy members and guests will be entertained by Dr. and Mrs. Francis M. Brian of Alexandria and Dr. and Mrs. Edward M. Harrell of Lafayette. Dr. Brian is President of the Academy and Dr. Harrell is President-elect.

The Academy's Congress of Delegates will be in session on the morning of October 15 with Dr. Rafael C. Sanchez of New Orleans, Speaker of the Congress, as presiding officer. Scientific sessions will begin on the morning of Wednesday, October 16 and Dr. Boyd M. Woodard of Lake Charles will preside. Seven physicians will appear on the scientific program.

Two medical films, Medical Care for Adolescents and Innovations in Transfusion Therapy will be shown, one on the morning of October 16 and one on October 17.

STANDING COMMITTEES THE NEW ORLEANS GRADUATE MEDICAL ASSEMBLY 1963-1964

The twenty-seventh annual meeting of The New Orleans Graduate Medical Assembly will be held March 2-5, 1964 at The Roosevelt Hotel. Listed below are the Chairmen and Vice-chairmen of the Standing Committees.

Advertising and Publicity: Thomas E. Weiss, M. D., Chairman; Rafael C. Sanchez, M. D., Vice-chairman.

Attendance: John G. Menville, M. D., Chairman; George S. Ellis, M. D., Vice-chairman.

Badge: Dorothy J. York, M. D., Chairman; Fred O. Brumfield, M. D., Vice-chairman.

Constitution and By-Laws: Andrew V. Friedrichs, M. D., Chairman; Sam Hobson, M. D., Vice-chairman.

Finance: Ralph M. Hartwell, M. D., Chairman; Emmett L. Irwin, M. D., Vice-chairman.

Halls and Screens: Anthony Failla, M. D., Chairman; Friedrichs H. Harris, M. D., Vice-chairman.

Hospitals: Edgar Hull, M. D., Chairman, Robert Bernhard, Jr., M. D., Vice-chairman.

Hotels: Henry D. Ogden, M. D., Chairman; A. N. Houston, M. D., Vice-chairman.

Medical Motion Pictures: C. Richard Walters, M. D., Chairman; Robert C. Kelleher, M. D., Vice-chairman.

Printing: Eugene H. Countiss, M. D., Chairman; Barrett Kennedy, M. D., Vice-chairman.

Reception: Charles L. Brown, M. D., Chairman; Ambrose H. Storck, M. D., Vice-chairman.

Registration: Val H. Fuchs, M. D., Chairman; N. Leon Hart, M. D., Vice-chairman.

Round-Table Luncheons: William W. Frye, M. D., Chairman; John F. Oakley, M. D., Vice-chairman.

Technical Exhibits: J. Theo Brierre, M. D., Chairman; Richard L. Buck, M. D., Vice-chairman.

Telephone & Transportation: R. Prosser Morrow, Jr., M. D., Chairman; Richard W. Vincent, M. D., Vice-chairman.

FIFTY-SEVENTH ANNUAL MEETING SOUTHERN MEDICAL ASSOCIATION

Leading physicians from all over the United States have accepted invitations to appear as special guest speakers on the program for the 57th Annual Meeting of the Southern Medical Association to be held in New Orleans, La., November 18-21, 1963.

These special guest speakers and the specialty programs on which they will appear are: John M. Sheldon, M. D., Ann Arbor, Mich., Allergy; Vincent J. Collins, M. D., Chicago, Ill., Anesthesiology; Thomas B. Fitzpatrick, M. D., Weston, Mass., Dermatology; Charles F. Code, M. D., Rochester, Minn., Gastroenterology; Philip Thorek, M. D., Chicago, Ill., General Practice; Carl T. Javert, M. D., New York, N. Y., Gynecology; Frank Mason Sones, Jr., M. D., Cleveland, Ohio, Medicine; W. James Gardner, M. D., Cleveland, Ohio, Neurology and Psychiatry; F. Bayard Carter, M. D., Durham, N. C., Obstetrics; Harold F. Schuknecht, M. D., Boston, Mass., Ophthalmology and Otolaryngology; Herbert E. Pedersen, M. D., Dearborn, Mich., Orthopedic and Traumatic Surgery; Felix Wroblewski, M. D., New York, N. Y., Pathology; John Caffey, M. D., Denver, Colo., Pediatrics; Robert A. Chase, M. D., Palo Alto, Calif., Plastic and Reconstructive Surgery; Robert A. Scarborough, M. D., San Francisco, Calif., Proctology, E. B. D. Neuhauser, M. D., Boston, Mass., Radiology; Geza de Takats, M. D., Chicago, Ill., Surgery; and John W. Draper, M. D., New York, N. Y., Urology.

In addition to these special guests, approximately 500 more physicians will participate in the program during the 4 day scientific and educational meeting. Some 200 scientific and technical exhibits will form an integral part of the meeting.

Three well-planned symposia will highlight the meeting—one on organ transplantation led by Clifford C. Snyder, M. D., Miami, Fla., and featuring such experienced men in this field as Charles C. Sprague, M. D., New Orleans, La.; Charles DeWitt, M. D., New Orleans, La.; James D. Hardy, M. D., Jackson, Miss.; David M. Hume, M. D., Richmond, Va.; and Thomas E. Starzl, M. D., Denver, Colo.

A second symposium on thermal modalities in medicine, arranged by Benjamin F. Byrd, Jr., M. D., Nashville, Tenn., will have the following participants: John Adriani, M. D., New Orleans, La.; N. C. Hightower, Jr., M. D., Temple, Texas; Curtis P. Artz, M. D., Jackson, Miss.; John E. Adams, M. D., San Francisco, Calif.; and Arlie R. Mansberger, Jr., M. D., Baltimore, Md.

The third symposium, concerned with the relationship of enzymes and viruses to cancer, will be headed up by Murray M. Copeland, M. D., Houston, Texas, and will feature W. Ray Bryan, M. D., Bethesda, Md.; Leon Dmochowski, M. D., Houston, Texas; James T. Grace, M. D., Buffalo, N. Y.; and Felix Wroblewski, M. D., New York, N. Y.

Workshops—Refresher Courses—Round Table Luncheons and Fireside Conferences will be some of the activities of special interest to pathologists, radiologists, and chest physicians. The Southern Medical Association will cooperate with the College of American Pathologists in holding a workshop on professional problems of the pathologist designed primarily for senior pathology residents. Radiology Refresher Courses, co-sponsored by the Association and the Radiological Society of North America, will have lectures on "The Radiologic Evolution of Generalized Skeletal Dysplasias," "Juvenile Osteochondrosis," "Leukemia: Its Diverse Manifestations," and "Radiologic Aspects of Respiratory Distress in Infants and Children." Round Table Luncheons and Fireside Conferences, joint presentations of the American College of Chest Physicians, Southern Chapter, and the Southern Medical Association, will feature several groups of prominent scientists discussing recent advances in the diagnosis and treatment of cardiopulmonary disease.

A full schedule of closed-circuit color televi-

sion programs, under the direction of Louis Burroughs, M. D., New Orleans, La., and his committee, has been planned for the Sections on Ophthalmology and Otolaryngology, Gynecology and Obstetrics, Surgery and Pathology, Plastic and Reconstructive Surgery, Proctology, Pathology, Gastroenterology and Proctology, and Dermatology. Physicians responsible for each program are: Harold G. Tabb, M. D., Conrad G. Collins, M. D., Edward T. Krementz, M. D., Richard Vincent, M. D., Patrick H. Hanley, M. D., Emma S. Moss, M. D., W. D. Davis, Jr., M. D., and Vincent J. Derbes, M. D., all of New Orleans, La.

On the lighter side of the meeting, a golf tournament has been scheduled by Ruble E. Moor, M. D., New Orleans, La., and the entertainment features include alumni and fraternity reunions, the President's Luncheon with Edward R. Annis, M. D., Miami, Fla., President of the American Medical Association, as guest speaker, and the Association's annual dinner dance. Many activities are also planned for the pleasure of the physicians' wives. The ladies will have many interesting things to do and places to visit in New Orleans while their husbands are in scientific sessions.

Complete programs for the meeting are now available.

RECIPIENTS NAMED FOR W. B. SAUNDERS COMPANY WRITING FELLOWSHIP AWARD

The extensive and enthusiastic response to the announcement of the Saunders 75th Anniversary Writing Fellowship has resulted in the awarding of two grants instead of the previously announced single award.

So many outstanding applications were received by the Selection Board from medical scientists of distinguished accomplishment, that an Executive Committee consisting of Robert F. Loeb, Rene J. Dubos, Henry Allen Moe, and Robert S. Morison recommended to the Saunders Company that it mark its anniversary with two equal fellowships, each in the amount of $15,000.

Saunders accepted this recommendation and announces that the two recipients chosen by the eminent selection board are Dr. Herman M. Kalckar, of Harvard Medical School, and Dr. Paul B. Beeson, of Yale University School of Medicine.

Dr. Kalckar will be writing on Biological Patterns of Cells in Developmental Defects and Disease States.

Dr. Beeson will be writing on Associations of Specific Infections with Certain Disease States of Man.

Formal presentation of the awards will be made individually to each grantee at two dinners to be held in the fall and early winter.

CALL FOR PAPERS, SCIENTIFIC EXHIBITS AND MOTION PICTURES FOR THE 113TH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION

June 21-25, 1964—San Francisco

Those who desire to present scientific papers before the Sections of the Scientific Assembly should communicate with the Secretary of the appropriate Section well in advance of the **deadline date, December 15, 1963.** The Secretaries and their addresses are listed in THE JOURNAL AMA in the last issue of every month.

Those who wish to apply for space in The Scientific Exhibit should request application forms from the Director, Scientific Exhibit, Department of Scientific Assembly, American Medical Association, 535 N. Dearborn St., Chicago 10, Illinois, well in advance of the **deadline date for receipt of applications, January 10, 1964.**

Those who desire to present motion pictures should request application forms from the Director, Medical Motion Pictures and Television, Department of Scientific Assembly, American Medical Association, 535 N. Dearborn St., Chicago 10, Ill., well in advance of the **deadline date, January 10, 1964.**

POSTGRADUATE COURSE IN OPHTHALMOLOGY

The Fifth Annual Postgraduate Course in Ophthalmology of the Emory University School of Medicine will be presented on Thursday, December 5 and Friday, December 6, 1963, at the Grady Memorial Hospital, Atlanta, Georgia.

Ophthalmic surgery with emphasis on surgical technic, will be the topic of the meeting. Guest lecturers for the 1963 course will be Dr. Paul Chandler, Boston, Mass.; Dr. Wendell Hughes, Hempstead, L. I., and Dr. Harry King, Washington, D. C.

Preoperative and postoperative management, and surgical principles and technics in glaucoma surgery, cataract surgery, corneal, conjunctival and eyelid surgery will be discussed.

AMERICAN COLLEGE OF PHYSICIANS SCHEDULES THREE-DAY SECTIONAL MEETING

More than 100 physicians will be on the scientific program of the American College of Physicians' First Sectional Meeting (Midwest), to be held November 21-23 in Detroit, Mich.

Following the general format of the College's Annual Meeting, the Sectional Meeting will consist of general clinical sessions, combined clinical investigation and basic science sessions, panel discussions and symposia.

According to Dr. Edward C. Rosenow, Jr., Philadelphia, Pa., Executive Director of the American College of Physicians, the three days

will be devoted entirely to postgraduate activities. No formal social events or business meetings of the College are scheduled.

Two sessions will be held concurrently mornings and afternoons in the Sheraton-Cadillac Hotel. On each morning, medical scientists will present general clinical lectures at one session and reports on clinical investigations and basic science activities at the other.

Thursday afternoon's program will consist of symposia on upper gastrointestinal hemorrhage and pulmonary disease problems. Symposia on cardiac arrhythmias and interpretation of antibody response in disease are scheduled for Friday afternoon. Concluding sessions, on endocarditis and cerebrovascular disease.

Plans for the First Sectional Meeting (Midwest) are under the direction of Dr. Wesley W. Spink, Minneapolis, Minn., President of the American College of Physicians and Professor of Medicine at the University of Minnesota. Dr. James T. Howell, Detroit, Mich., Henry Ford Hospital, is Chairman of the Local Committee on Arrangements.

The Sectional Meeting is another of the postgraduate education activities of the American College of Physicians, 48-year-old medical organization which represents more than 11,600 internists and specialists in related fields.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

The next scheduled Part I (written) Examination of this Board will be held at various examining centers in the United States, Canada, and military bases outside of the continental United States on Friday, December 13, 1963, at 2:00 P.M. Candidates eligible to take this examination will be notified on or about November the first where to appear for examination.

FILMSTRIP RECEIVES BLUE RIBBON AWARD

"The Role of Urine in Diagnosis", Part II, a filmstrip produced under the direction of the American Society of Clinical Pathology, and made available to the medical profession by the Ames Company, Inc., of Elkhart, Indiana, received a blue ribbon award at the annual American Film Festival held recently in New York.

The filmstrip received the award from a field of all films produced in the United States and Canada during 1962, on its suitability and content to the medical profession.

Part II of "The Role of Urine in Diagnosis" provides basic orientation on the identification and clinical meaning of many urine substances. It is intended to aid medical technologists, medical students, interns, residents, and practicing physicians to gain a better understanding of the basic methodologies and interpretations of this important area of clinical pathology. It is one of a series of four filmstrips on urinalysis and renal function.

1963 MEDICAL LIBRARY ASSOCIATION AWARDS

Dr. Stanislaw Konopka, Director of the Central Medical Library, Ministry of Health, Warsaw, Poland has received the Association's highest honor, the Marcia C. Noyes Award. This award is reserved for the recognition of outstanding careers in medical librarianship. Dr. Konopka was honored for his achievement in rebuilding a national medical library system after the devastation of World War II and for his accomplishments as a medical bibliographer and historian.

The Murray Gottlieb Prize for an essay on some phase of the history of American medicine was given to Miss Joan Titley, Librarian of the University of Louisville Medical School. Miss Titley's essay was entitled "The Library of the Louisville Medical Institute, 1837/47."

Dr. Frank B. Rogers, Director of the National Library of Medicine and Mrs. Thelma Charen, Bibliographic Services Division, National Library of Medicine shared the Ida and George Eliot Prize Award for their article, "Abbreviations for Medical Journal Titles."

P&G ANNOUNCES $450,000 MEDICAL SCHOOL GRANT PROGRAM

Procter & Gamble recently announced a program of grants to six schools of medicine totaling $450,000 over the next five years.

The medical schools are located at Columbia University, the University of Chicago, Harvard University, Johns Hopkins University, the University of Pennsylvania and Washington University.

Howard Morgens, president of Procter & Gamble, announced the medical school program as an addition to other activities by P&G on behalf of higher education in the United States. The new program will add $90,000 annually to Procter & Gamble's efforts to support independent colleges and universities and will bring the total to more than $1,300,000 a year.

"The six medical schools were selected," the statement by Mr. Morgens said, "because of the number and quality of the men they have contributed to the teaching staffs of virtually all of the nation's medical schools.

"We believe that support of these schools, on which other medical teaching institutions depend heavily for their teaching staffs, will help improve the teaching of medicine and will help increase the number of practicing physicians available to the U.S. population.

"It is for that reason that we feel special as-

sistance to these schools is warranted."

Mr. Morgens took note of the declining ratio of doctors to population, stating that the present ratio of one doctor for each 750 persons in the country is expected to drop to one for each 1125 persons by 1975 under present rates of doctor training.

The money given to each school may be used in any way its officers and faculty determine.

Addition of the medical program to P&G's educational support activities makes seven different ways in which the Cincinnati firm supports higher education.

A scholarship program, in effect since 1954, provides full tuition and incidental payments for 240 students each year. Another activity, initiated by P&G in 1957, provides $20,000 per year to each of 14 major American universities, while a third supplies $15,000 annually to each of five graduate schools of education. A fourth program provides $113,000 a year to forty state associations of colleges for division among their member schools. Fellowships in technical fields and special grants to educational organizations also are paid each year by P&G.

GASTROENTEROLOGICAL CONVENTION

The 28th Annual Convention of the American College of Gastroenterology will be held at The Shoreham in Washington, D. C., on October 21, 22, 23, 1963.

In addition to the several individual papers to be presented, there will be a Panel Discussion on Amebiasis, a Symposium on the Esophagus, and a series of papers on gastric cooling and gastric freezing. There will again be scientific as well as commercial exhibits and the sessions will be open to all physicians without charge.

On October 24, 25, 26, immediately following the Convention, the annual course in Postgraduate Gastroenterology will again be given. The moderators will be Dr. I. Snapper, Beth-El Hospital, Brooklyn, N. Y., and Dr. John L. Madden, Clinical Professor of Surgery, New York Medical College; Director of Surgery, St. Clare's Hospital, New York, N. Y. The sessions will be held at The Shoreham and at the Mount Alto Veterans Administration Hospital. Attendance at the course will be limited to those who have registered in advance.

Silver certificates are to be presented to those who have been affiliated with the organization for 25 years.

The Annual Convocation Ceremony will be held at The Shoreham on Sunday evening, October 20, at which time the principal speaker will be Dr. Edward C. Rosenow, Jr., Honorary Fellow of the College and the Executive Director of the American College of Physicians.

Copies of the program and further information may be obtained by writing to: American College of Gastroenterology, 33 West 60th Street, New York, N. Y. 10023.

FOREIGN FELLOWSHIPS FOR MEDICAL STUDENTS

The Association of American Medical Colleges announced today that Smith Kline & French Foreign Fellowships for Medical Students will be awarded again next year. The Fellowships provide approximately 30 students with the opportunity to assist and observe physicians for at least 10 weeks, at rural medical stations in remote and underdeveloped areas of Latin America, Asia, Africa, and Oceania.

Dr. Ward Darley, executive director of the Association, stated that the Association is now accepting applications from junior and senior medical students for the Fellowships and that application forms and brochures have been sent to all medical school deans. The closing date for submitting applications is December 31, 1963.

The Fellows gain firsthand experience with diseases not common in the United States, and they are exposed to unusual clinical and preventive health problems in societies and cultures different from their own. In Afghanistan, Peru, Borneo, Uganda, and other countries desperately in need of medical aid, students have made significant contributions to international medicine and to better understanding between peoples.

During the past four years, 123 students have worked in 40 foreign countries on grants totaling $200,000 provided by the Philadelphia pharmaceutical firm of Smith Kline & French Laboratories. Fellowship grants cover travel and living expenses.

Students should contact their deans for instructions and application forms.

For additional information, write to SK&F Foreign Fellowships, AAMC headquarters, 2530 Ridge Ave., Evanston, Ill.

BOOK REVIEWS

Clinical Examinations in Neurology, Mayo Clinic and Mayo Foundation, Section of Neurology and Section of Physiology, 2nd. ed., W. B. Saunders Company, Philadelphia and London, 1963. 396 p. $8.50.

This second edition of a volume which first appeared in 1956 contains, in addition to the contents of the first edition, a chapter entitled "Neuroradiologic Procedures." The description of neurologic examinations on infants contained in the first edition has been expanded. The list of contributors has been altered; since the first edition was written, Dr. H. L. Parker and Dr. L. M. Eaton have died.

This book admirably fulfills its aim at brevity. It is the most concise, practical work of its kind in the English language today. The chief purpose of the book was to facilitate mastery of the clinical neurologic examination by resident physicians, but since the central and peripheral nervous systems are now recognized as "barometers" of systemic disease, this book is essential for all who perform (or will perform) neurologic examinations, that is, medical students, interns, residents, internists, pediatricians, orthopedists, and psychiatrists as well as neurologists. Although aiming at brevity, the contributors have inserted, when appropriate, information regarding the significance of the various tests as they relate to anatomy, physiology, and disease.

The sections on the neurologic history and the neurologic examination are concisely but thoroughly discussed, with avoidance of hundreds of foreign names and rarely used, obscure supplemental tests. The chapter on "Neuro-ophthalmology" is especially useful for the novice. The recent advances in diagnostic neurology are included in the following chapters: "Electroencephalography," "Electromyography and Electric Stimulation of Peripheral Nerves and Muscles," and "Biochemical and Pharmacologic Aids in Neurologic Diagnosis."

The index and illustrations are excellent. Many of the illustrations deal with the muscles and their actions. Although these are excellent, it would seem that the novice might obtain clearer delineation of the testing of strength of the individual muscle groups from the illustrations regarding this subject contained in *Peripheral Nerve Injuries, Principles of Diagnosis*, by Haymaker and Woodhall published by the same publisher. This is merely a comparison and is not necessarily a deficiency in the Mayo Clinic volume.

T. L. L. Soniat, M. D.

W. B. SAUNDERS COMPANY features the following new books and new editions in their full page advertisement appearing elsewhere in this issue:

CURRENT PEDIATRIC THERAPY — Edited by Gellis and Kagan

This new book gives you the best treatments, currently in use by leading authorities, for over 300 diseases and disorders that afflict children.

MAINLAND—ELEMENTARY MEDICAL STATISTICS

A New (2nd) Edition—revised to bolster your statistical thinking and also your use of standard statistical formulas and procedures.

PUBLICATIONS RECEIVED

(Certain ones of these will be selected for review)

C. V. Mosby Co., St. Louis: Crossen's Synopsis of Gynecology (6th edit.), by Daniel Winston Beacham, M. D. and Woodard Davis Beacham, M. D.; Physical Diagnosis, by John A. Prior, M. D. and Jack S. Silberstein, M. D.

W. B. Saunders Co., Phila.: pH and Dissociation, by Halvor N. Christensen, Ph.D.

Scholar's Library, N. Y.: Cell Interface Reactions, by A. D. McLaren, Peter Mitchell, and H. Passow, edited by H. D. Brown.



The Lady Governors of the Old Men's Home at Haarlem — FRANS HALS, 1580/81-1666

In Geriatrics...

METAMUCIL® Provides Bland Smoothage

brand of psyllium hydrophilic mucilloid

The tendency of the elderly to subsist on low-residue foods often is a prime cause of bowel sluggishness. Adequate fecal content is necessary to maintain normal colonic function, since intracolonic distention is nature's method of stimulating reflex peristalsis.

Metamucil, therefore, fulfills a basic function in the treatment of geriatric constipation. It both softens hard, dehydrated fecal concretions and adds smooth, nonirritant, easily compressible hydrophilic bulk.

Metamucil applies a physiologic principle to correct constipation naturally.

Average Adult Dose: One rounded teaspoonful of Metamucil powder (or one packet of Instant Mix Metamucil) in a glass of cool liquid. To Metamucil powder, a refined, purified and concentrated psyllium hydrophilic mucilloid, an equal amount of dextrose is added as a dispersing agent. Each dose of the powder furnishes a negligible amount of sodium and 14 calories. To the mucilloid in Instant Mix Metamucil citric acid, sodium bicarbonate and mild flavoring are added. Each dose of Instant Mix Metamucil furnishes 0.25 Gm. of sodium and 3 calories. Metamucil is available as Metamucil powder in containers of 4, 8 and 16 ounces and as flavored Instant Mix Metamucil in cartons of 16 and 30 single-dose packets.

G. D. SEARLE & CO.
CHICAGO, ILLINOIS, 60680
Research in the Service of Medicine

Pardon Me!



FOR EFFECTIVE CONTROL . . . OF MOST UNNECESSARY COUGHS

A POTENT antitussive and expectorant (without sugar)

TOLU-SED®

(For prompt relief of a wide variety of coughs, including those associated with colds, bronchitis, throat irritations, influenza, asthma, smoking, smog, dust irritation, and excessive use of the voice.)

EACH FLUID OUNCE CONTAINS:

64.8 mg.	**CODEINE PHOSPHATE***—For its well-known actions in suppressing unnecessary and nonproductive coughs, AND to decrease the viscosity of sputum.
6 mg.	**CHLORPHENIRAMINE MALEATE**—To correct those allergic components which may be due to histamines. (The antihistaminic may contribute the usefulness of this preparation if locally released histamine plays a role in the process which causes the bronchial irritation.)
600 mg.	**GLYCERYL GUAIACOLATE**—To increase the fluidity of respiratory tract secretions. This action decreases the irritating effect of inspissated mucus and facilitates its removal.
2.5 gr.	**TOLU**—Because Tolu has been found useful on an empirical basis for coughs of diverse etiology.
2 min.	**CHLOROFORM**

***Contraindications:**

Codeine phosphate may be habit forming. In very large doses it may depress respiration.

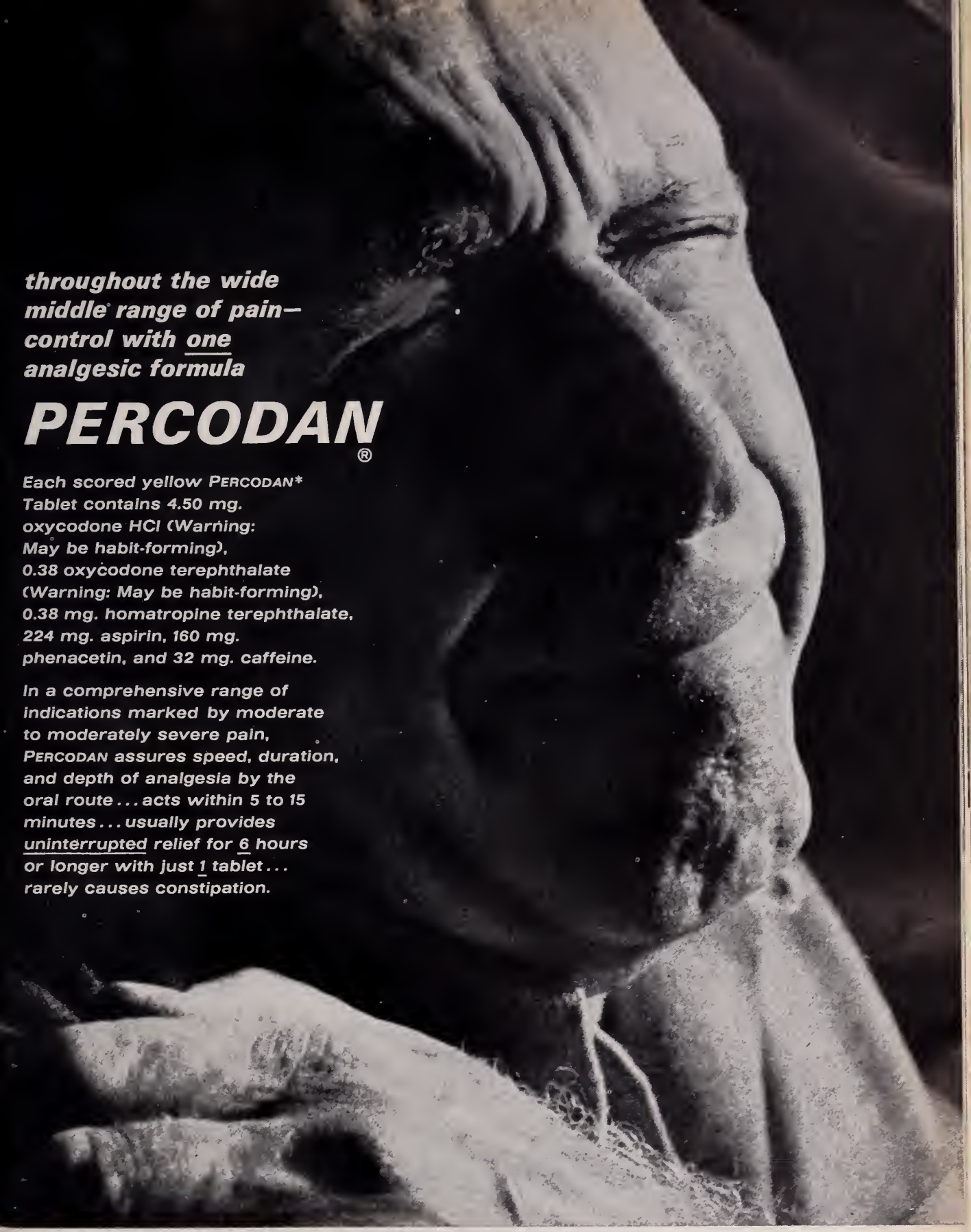
Availability: Pints and Gallons

Administration and Dosage:
For Adults: 1 teaspoonful which may be repeated every 3 or 4 hours.

For Children over 6 years of age: ½ teaspoonful every 4 hours if necessary.

First Texas *Pharmaceuticals, Inc.*

DALLAS • ATLANTA • SINCE 1901



throughout the wide middle range of pain— control with one analgesic formula

PERCODAN®

Each scored yellow PERCODAN* *Tablet contains 4.50 mg. oxycodone HCl (Warning: May be habit-forming), 0.38 oxycodone terephthalate (Warning: May be habit-forming), 0.38 mg. homatropine terephthalate, 224 mg. aspirin, 160 mg. phenacetin, and 32 mg. caffeine.*

In a comprehensive range of indications marked by moderate to moderately severe pain, PERCODAN *assures speed, duration, and depth of analgesia by the oral route . . . acts within 5 to 15 minutes . . . usually provides uninterrupted relief for 6 hours or longer with just 1 tablet . . . rarely causes constipation.*

Average Adult Dose—1 tablet every 6 hours. **Precautions, Side Effects and Contraindications**—The habit-forming potentialities of Percodan are somewhat less than those of morphine and somewhat greater than those of codeine. The usual precautions should be observed as with other opiate analgesics. Although generally well tolerated, Percodan may cause nausea, emesis, or constipation in some patients. Percodan should be used with caution in patients with known idiosyncrasies to aspirin or phenacetin, and in those with blood dyscrasias. **Also available:** Percodan®-Demi, containing the complete Percodan formula but with only half the amount of salts of oxycodone and homatropine. Both products are on oral Rx in all states where laws permit. Narcotic order required. **Literature on request.** **ENDO LABORATORIES Richmond Hill 18, New York**

Endo®

*U. S. Pats. 2,628,185 and 2,907,768

Browne-McHardy Clinics

MAIN CLINIC
3636 St. Charles Ave.
New Orleans 15, La.
TWinbrook 9-2376

GRAVIER ST. DIVISION
630 Gravier St.
New Orleans 12, La.
524-1605

VETERANS HIGHWAY DIVISION
8601 Veterans Memorial Hwy.
Metairie, La.
VErnon 3-7341

INTERNAL MEDICINE
Cardiology
Endocrinology
Gastroenterology
Hematology
Rheumatology

Donovan C. Browne, M. D.
Wiley H. Jenkins, M. D.
Robert C. Judice, M. D.
John T. Leckert, M. D.
G. Gordon McHardy, M. D.
Robert J. McHardy, M. D.
Swan S. Ward, M. D.
George E. Welch, M. D.
Guy T. Williams, M. D.
Manuel Paez, M. D.

DERMATOLOGY
William Eggerton, M. D.

DISEASES OF THE CHEST
Joseph E. Blum, Jr., M. D.

EAR, NOSE and THROAT
Norma Kearby, M. D.

GENERAL SURGERY
Claude C. Craighead, M. D.
Raul G. Reyes, M. D.

OBSTETRICS and GYNECOLOGY
C. Gordon Johnson, M. D.
Robert I. Ayerst, M. D.
James M. Todd, Jr., M. D.

OPHTHALMOLOGY
Oliver H. Dabezies, M. D.

INDUSTRIAL MEDICINE
Ralph J. McDonough, M. D.

PEDIATRICS
Carl E. Kemmerly, M. D.
Milton H. Donaldson, M. D.

RADIOLOGY and RADIOTHERAPY
Charles O'Dowd Lilly, M. D.
Joseph B. Marino, M. D.
Walter McDowell, M. D.

UROLOGY
John F. Lally, M. D.
George Cuellar, M. D.

AUXILIARY SERVICES
Cytology
Diabetics
Electroencephalograph
Endoscopy
Medical Laboratory
Pharmacy
Physical Therapy
Pulmonary Function Studies

from CURITY

A big aseptic advance in a tiny new package

The New WEBCOL Alcohol Preps

Sterile—ethylene oxide kills alcohol resistant spores.

Convenient—ready for instant use.

Economical—no waste from evaporation, no dripping from excess saturation.

PEACOCK
SURGICAL COMPANY INC.
1235 TEXAS AVENUE
SHREVEPORT, LOUISIANA



In Sprains, Strains and Muscle Spasm, 'Soma' Compound

numbs the pain...not the patient

A potent analgesic and a superior muscle relaxant

1. A sprain or fracture is not a big clinical problem—but it does hurt. And if there is housework to do and kids to mind, the patient needs something to numb the pain.

2. A.P.C. compounds have limited usefulness; and the patient can buy them without your prescription. Unfortunately, most of them are too mild to be effective for sprains—and more potent products too often make the patient feel 'dopey'.

3. 'Soma' Compound is ideal in these cases. Since it contains both 'Soma' (carisoprodol) and acetophenetidin it is both a potent analgesic and a superior muscle relaxant; it also contains caffeine to offset any drowsiness *("numbs the pain...not the patient")*.

4. Why not try 'Soma' Compound? Dosage is 1 or 2 tablets q.i.d. For more severe pain, try 'Soma' Compound + Codeine. Dosage: 1 or 2 tablets q.i.d.

5. Hypersensitivity to carisoprodol may occur rarely. Codeine may produce addiction, nausea, vomiting, constipation or miosis.

Soma® Compound

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg.

Soma® Compound + Codeine

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg., codeine phosphate 16 mg. (Warning—may be habit forming.)

®WALLACE LABORATORIES / *Cranbury, N.J.*

CSO-9193



For peptic ulcer gastric hyperacidity and gastritis...

In year-long study on peptic-ulcer patients

New Creamalin®
Antacid Tablets

*"...faster in onset of action...and for a longer period"**

"Clinical studies in 85 patients with duodenal ulcer ...confirmed the superiority of the new preparation [new Creamalin] over standard aluminum hydroxide preparations, in that prompt relief was achieved and maintained throughout the period of observation."*

Patients were followed for about one year.

New Creamalin promotes ulcer healing, permits less frequent feedings because it is so long-acting. Heartburn and epigastric distress were "...easily and adequately controlled...."* New Creamalin has the therapeutic advantage of a liquid antacid with the convenience of a palatable tablet. *It does not cause constipation.*

Each new Creamalin tablet contains 320 mg. of specially processed highly reactive dried aluminum gel (stabilized with hexitol) with 75 mg. of magnesium hydroxide. Minute particles offer a vastly increased surface area.

Dosage: Gastric hyperacidity—from 2 to 4 tablets as needed. Peptic ulcer or gastritis—from 2 to 4 tablets every two to four hours. *How Supplied:* Bottles of 50, 100, 200 and 1000.

Now also available—New Creamalin Improved Formula Liquid. Pleasant mint flavor—creamy pink color. Stabilized reactive aluminum and magnesium hydroxide gel (1 teaspoon equals 1 tablet). Bottles of 8 and 16 fl. oz.

Creamalin, trademark reg. U.S. Pat. Off.

*Schwartz, I. R.:
Current Therap. Res. 3:29, Feb., 1961.

Winthrop LABORATORIES New York 18, N. Y.

Important
news in
cardiac therapy

Two new clinical
reports document
successful long-
term treatment
of ischemic heart
disease with
Persantin,® brand of
dipyridamole

See next 3 pages

Study 1.
Griep,A.H.: Long-term Therapy of Ischemic Heart Disease With Oral Dipyridamole:
A Report of Fifty Cases. Angiology 14:484, 1963.

Persantin,® brand of dipyridamole, 25 mg. t.i.d. or q.i.d.,was administered continuously for 6 months to 50 patients with well authenticated ischemic heart disease with angina pectoris and ECG abnormalities. Results were evaluated on a monthly basis; final evaluation after 6 months showed that 56% of patients were completely free of, or had markedly fewer, anginal attacks, with normal or improved ECG findings; an additional 24% experienced fewer, milder attacks and improved work capacity.

Persantin®
brand of dipyridamole

"...long-term oral therapy with dipyridamole was of benefit in 80 per cent of the patients... relief [of angina] came slowly and was usually maximal after three to six months of continuous treatment"

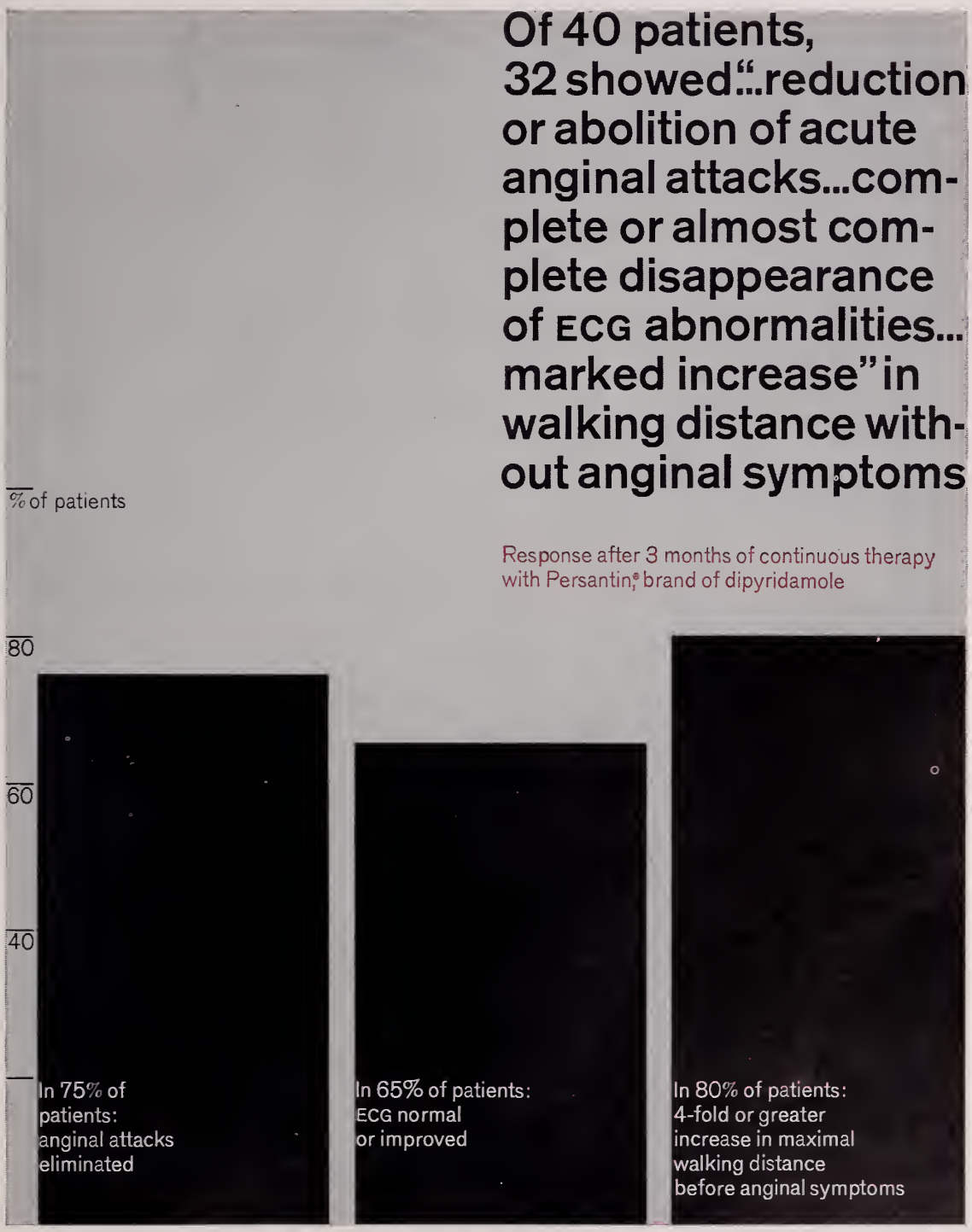
Steady, month-by-month improvement with Persantin,® brand of dipyridamole, refutes possibility of "placebo response", reflects gradual improvement in underlying pathology.



Study 2.
Wirecki,M.: Dipyridamole (Persantin®): Evaluation of Long-Term Therapy in Angina Pectoris. Current Therapeutic Research 5:472, 1963.

In 40 ambulatory patients with myocardial ischemia, angina pectoris, and abnormal ECG findings, Persantin,® brand of dipyridamole, 25 mg. t.i.d., was administered continuously for 3 months.

Results after 3 months of therapy revealed a satisfactory clinical response in 32 patients. The accompanying diagram illustrates the specific criteria of improvement in patients with excellent or good response.



How Persantin,® brand of dipyridamole, provides long-term clinical benefits reported on previous pages

1. By increasing energy yield
of the hypoxic myocardial cell, by direct action upon the sarcosomes (heart mitochondria).[1-5]

2. By improving collateral coronary circulation.
Prolonged oral administration of dipyridamole to animals with experimentally induced stenosis of a major coronary artery resulted in superior development of collateral coronary anastomoses and longer survival compared with controls.[6-9]

When given for prolonged periods and in adequate dosage, dipyridamole improves the coronary flow deficit of the ischemic myocardium while supporting cardiac metabolism during the period of repair. Clinically, this is manifested as steady improvement – anginal attacks diminish in frequency and intensity, as do other manifestations of insufficiency (dyspnea, fatigue, and, in many instances, abnormal electrocardiographic findings).

Availability:
Tablets of 25 mg., bottles of 100 and 1000.
Under license from Boehringer Ingelheim G.m.b.H.

Prescribing summary: Persantin,® brand of dipyridamole, is indicated in coronary and myocardial insufficiency, in a dosage of 2 to 6 tablets daily in divided doses before meals for several weeks. Side effects (headache, dizziness, nausea, flushing, weakness, syncope, mild gastrointestinal distress) are minimal and transient. The drug is not recommended in the acute phase of myocardial infarction, and should be used cautiously in hypotension.

References: 1.Kunz,W.;Schmid,W.,and Siess,M.: Arzneimittel-Forsch.12:1098,1962. 2.Siess,M.: Arzneimittel-Forsch.12:683,1962. 3.Laudahn,G.: Experientia 17:415,1961. 4.Lamprecht,W.: 27th Congress of the German Society for Circulation Research,Bad Nauheim,1961. 5.Hockerts,T.,and Bögelmann,G.: Arzneimittel-Forsch.9:47,1959. 6.Vineberg,A.M.,et al.: Canad.M.A.J.87:336,1962. 7.Chari,S.R.et al.: Presented at the International Congress of Chest Physicians,New Delhi,1963. 8.Neuhaus,G.,et al.: Presented at the Fourth World Congress of Cardiology,Mexico City,1962. 9.Asada, S.,et al.: Japanese Circ.J.27:849,1962.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York, Distributors

PE-2254



Smooths out emotional peaks and valleys

Meprospan'-400 brand of meprobamate contains 400 mg. in sustained-release form. One capsule smooths out the anxious patient's emotional peaks and valleys for 10 to 12 hours — and provides these other advantages:

1. **Especially suitable for maintenance therapy.** Patients whose anxiety has diminished to a mild or moderate level still require a certain amount of tranquilization throughout the day. Sustained-release action is ideally suited to this type of patient.
2. **Simpler dosage schedule.** Since one capsule of 'Meprospan'-400 (meprobamate, sustained release) acts 10 to 12 hours, the patient enjoys a much simpler dosage schedule than with tablets — and is less likely to forget to take the medicine.

Side Effects: Rarely, skin reactions. May increase effects of excessive alcohol. Use with care in patients with suicidal tendencies. Massive overdosage may produce coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence in patients with history of drug or alcohol addiction.

Available: *'Meprospan'-400* (meprobamate, sustained release) contains meprobamate 400 mg. *'Meprospan'-200* (meprobamate, sustained release) contains meprobamate 200 mg. Both potencies in bottles of 30. **Usual dosage:** One 400 mg. capsule or two 200 mg. capsules at breakfast; repeat with evening meal.

Meprospan®-400
meprobamate 400 mg.
sustained release

WALLACE LABORATORIES / *Cranbury, N.J.*

ME-9188

there is nothing "new" about Thorazine®



brand of
chlorpromazine

In the nine years since it became available to American physicians, Thorazine (chlorpromazine, SK&F) has been more widely used, more thoroughly investigated and more extensively documented than any other agent of its type.

Its actions, effects—and side effects—are well known throughout the medical profession. Its efficacy has been clearly demonstrated. And when properly used, its advantages far outweigh any possible disadvantages.

This is why there is nothing "new" about Thorazine (chlorpromazine, SK&F). This is why it remains the first choice in many conditions—and the standard against which other agents are inevitably compared.

This is why it is one of the fundamental drugs in medicine.

SMITH KLINE & FRENCH
LABORATORIES, PHILADELPHIA

SK&F

cut Rx writing by 2/3 in colds, flu or grippe

NAME _____

ADDRESS _____

℞

No need to write three separate prescriptions for antitussive, decongestant and analgesic relief of common cold, flu or grippe symptoms when it is therapeutically correct... economically sound... to specify

ANTITUSSIVE/DECONGESTANT/ANALGESIC
'EMPRAZIL-C'® TABLETS

Each tablet contains:	
Codeine Phosphate*	15 mg.
'Sudafed'® brand Pseudoephedrine Hydrochloride	20 mg.
'Perazil'® brand Chlorcyclizine Hydrochloride	15 mg.
Phenacetin	150 mg.
Aspirin	200 mg.
Caffeine	30 mg.

*Warning—may be habit forming

'Emprazil-C' Tablets are available on prescription only.

Dosage: Adults and children over 12 years—1 or 2 tablets—3 times daily as required. Children 6 to 12 years—1 tablet—3 times daily as required. **Caution:** While pseudoephedrine is virtually without pressor effect in normotensive patients, it should be used with caution in hypertension. Also, while chlorcyclizine has a low incidence of antihistaminic drowsiness, the usual precautions should be observed. **Supplied:** Bottles of 100 tablets.

Also available without codeine as 'EMPRAZIL'® TABLETS

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO (U.S.A.) INC.

Tuckahoe, N. Y.

ANNUAL CLINICAL CONFERENCE

CHICAGO MEDICAL SOCIETY

MARCH 2, 3, 4 AND 5, 1964

PALMER HOUSE, CHICAGO

Lectures
Medical Color Telecasts
Teaching Demonstrations
Film Lectures
Instructional Courses

The CHICAGO MEDICAL SOCIETY ANNUAL CLINICAL CONFERENCE should be a MUST on the calendar of every physician. Plan now to attend and make your reservation at the Palmer House.

To train the doctors of tomorrow, medical education needs your help today

Give to the school of your choice through AMEF

AMEF American Medical Education Foundation
535 N. Dearborn St., Chicago 10, Ill.



At home or traveling . . . effective management of
• AMEBIC DYSENTERY
• SIMPLE DIARRHEA

YODOXIN®
DIIODOHYDROXYQUIN U.S.P.



. . . THE DRUG OF CHOICE IN AMEBIC DYSENTERY
. . . FOUND EFFECTIVE IN THE MANAGEMENT OF NONSPECIFIC DIARRHEA
. . . LOW TOXICITY OF THIS DRUG COMPARED TO OTHER AMEBACIDES GIVES OUTSTANDING ADVANTAGES IN THESE ENTITIES

SUGGESTED DOSAGE:

AMEBIC DYSENTERY: Adults take 3 tablets t.i.d. after meals. This is continued for 20 days.

NONSPECIFIC ENTERITIS AND SIMPLE DIARRHEA: At first discomfort one tablet, another tablet two hours later. Repeat next day if diarrhea persists.

Chills, fever, rash, erythema and in rare cases furunculosis have been reported. Iodine containing compounds are contraindicated in patients with liver damage or known drug sensitivity.

For adequate use data please request and consult our product literature

GLENWOOD LABORATORIES, Inc., TENAFLY, N. J.

blood, milk and Maalox®

(magnesium-aluminum hydroxide gel)

Practically standard treatment, now, for perforated ulcer. Why is Maalox included? Antacid therapy *must* continue long after the wound has healed, and patients started on Maalox tend to stay on Maalox. It tastes good; it's effective and will not cause constipation—three important reasons for Maalox over the long haul. Some physicians, we are told, order Maalox routinely for hospital patients on drugs which could irritate. They feel it reduces the likelihood of gastric discomfort. Supplied: Suspension; Tablets No. 1; Tablets No. 2. (Each Maalox No. 1 Tablet is equivalent to 1 teaspoonful and each Maalox No. 2 Tablet is equivalent to 2 teaspoonfuls of Suspension.)



ROORER WILLIAM H. RORER, INC., FORT WASHINGTON, PA.

The one tranquilizer that

BELONGS IN EVERY PRACTICE

it's versatile: The years have proved that 'Miltown' (meprobamate) is the one tranquilizer that is helpful in almost every aspect of daily practice. Virtually any of your patients, regardless of age, can be given the drug with confidence, either as a primary treatment or as an adjunct to other therapy.

Outstanding record of safety: Over eight years of clinical use among millions of patients throughout the world — plus more than 1500 published reports covering the use of the drug in almost every field of medicine — support your prescriptions for 'Miltown' (meprobamate). This is why it *"belongs in every practice."*

dependable: 'Miltown' (meprobamate) is an established drug. There are no surprises in store for you or your patient. You can depend on it to help your patients through periods of emotional distress — and to help maintain their emotional stability.

easy to use: Because 'Miltown' (meprobamate) is compatible with almost any other kind of drug therapy, you'll find it fits in easily with any program of treatment you are now using. It will not, therefore, complicate treatment of patients seen in clinical practice.

BRIEF SUMMARY: *Indications:* Anxiety and tension states, and all conditions in which anxiety and tension are symptoms. *Side Effects:* Slight drowsiness may occur and, rarely, allergic or idiosyncratic reactions, generally developing after 1-4 doses of the drug. *Contraindications:* Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use. *Precautions:* Should administration of meprobamate cause drowsiness or visual disturbances, the dose should be reduced. Operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Prescribe cautiously and in small quantities, to patients with suicidal tendencies. Massive overdosage may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after prolonged use at high dosage. *Complete product information available to physicians on request.*

USUAL ADULT DOSAGE: 1 or 2 400 mg. tablets t.i.d.

SUPPLIED: 400 mg. scored tablets, 200 mg. coated tablets.

CM-9694



The insomniac



The tense, nervous patient



The heart-disease patient



The surgical patient



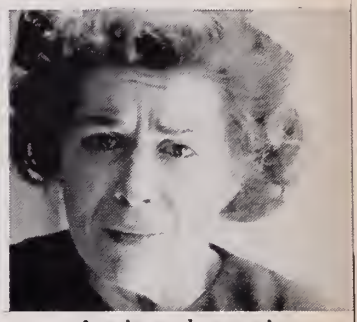
ıe girl with dermatosis



Tension headache



The woman in menopause



Anxious depression



Premenstrual tension



The agitated senile patient



The alcoholic



The problem child

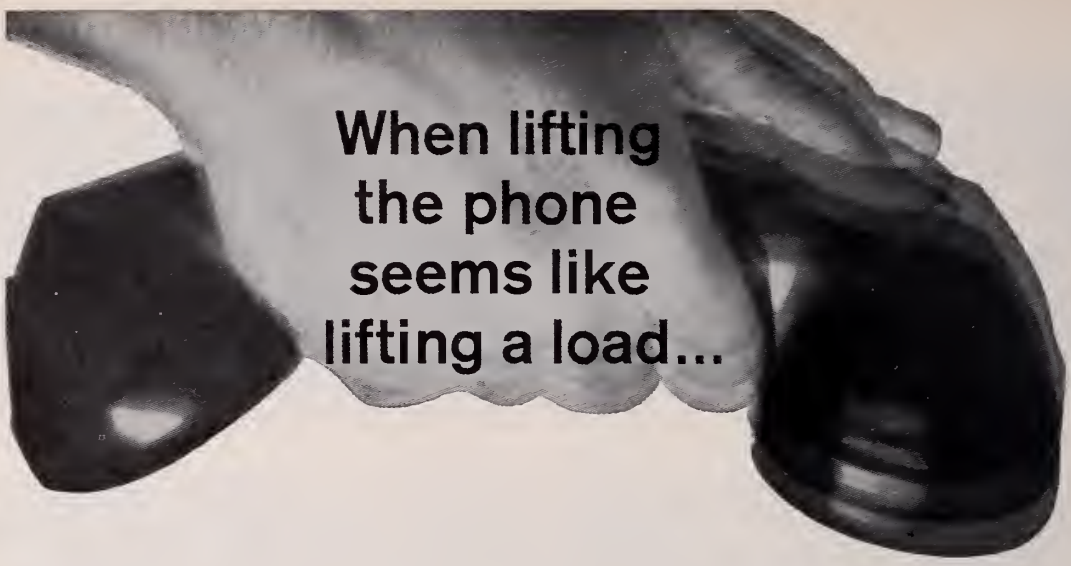
the original brand of
meprobamate

Miltown®



The G.I. patient

WALLACE LABORATORIES
Cranbury, N. J.



in chronic bronchitis and emphysema

ISUPREL® BRAND OF ISOPROTERENOL hydrochloride hydrochloride

MISTOMETER® Q.I.D.

ISUPREL (isoproterenol/Winthrop) "...can increase breathing efficiency in pulmonary emphysema."[1] The patient with chronic obstructive pulmonary disease "...should use the bronchodilator four times daily whether or not he experiences episodes of bronchospasm."[2]

Use of the Mistometer eases breathing by relaxing bronchospasm, and aiding productive cough. "Of the aerosol bronchodilators, ISUPREL (isoproterenol/Winthrop) seems to be the best...."[3] Conscientious use q.i.d. improves vital capacity and exercise tolerance.

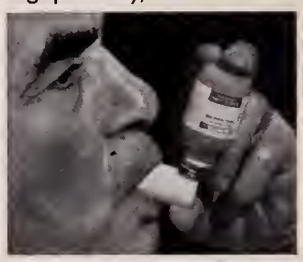
The Mistometer brings new efficacy and convenience—enables patients to maintain treatment wherever they are.

With use of ISUPREL (isoproterenol/Winthrop), occasionally tachycardia, palpitation, nervousness, nausea and vomiting or headache may occur, especially with excessive dosage. Adjust dosage carefully in patients with hyperthyroidism, acute coronary disease, cardiac asthma or limited cardiac reserve, and in persons sensitive to sympathomimetic amines.

Caution: Epinephrine should not be administered with ISUPREL (isoproterenol/Winthrop) as both drugs are direct cardiac stimulants and their combined effects may induce serious arrhythmia. If desired they may, however, be alternated, provided an interval of at least four hours has elapsed.

Dosage: Two inhalations at least one minute apart four times daily, regularly. Inhalations may be taken more often if indicated.

Available as ISUPREL HCl (isoproterenol HCl/Winthrop) Mistometer—single unit combining plastic nebulizer and ISUPREL (isoproterenol/Winthrop) solution 1:400—or 0.25 per cent w/w (=2.8 mg. per ml.), and includes alcohol, 33 per cent; bottles of 15 ml.



1. Reeves, J. E.: *M. Times* 90:512, May, 1962. 2. Williams, M. H., Jr.: *M. Sc.* 11: 433, March 19, 1962. 3. Peckenschneider, L. E.: *J. Kansas M. Soc.* 56:486, Sept., 1955.

Winthrop Laboratories, New York 18, N.Y.

Winthrop



after surgery: vitamins are therapy

Nutritional supplementation is basic to postoperative care. Therapeutic allowances of B and C vitamins help meet increased metabolic requirements and compensate for stress depletion. STRESSCAPS can set the patient on a more favorable course and contribute to full recovery.

FOR PROFESSIONAL

RECOMMENDATION ONLY

Each capsule contains: Vitamin B_1 (Thiamine Mononitrate)...10 mg. / Vitamin B_2 (Riboflavin)...10 mg. / Niacinamide... 100 mg. / Vitamin C (Ascorbic Acid)...300 mg. / Vitamin B_6 (Pyridoxine HCl)...2 mg. / Vitamin B_{12} Crystalline... 4 mcgm. / Calcium Pantothenate...20 mg. Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100.

Lederle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.

6316-3

STRESSCAPS®

Stress Formula Vitamins Lederle

reduce or obviate the need for transfusions and their attendant dangers

KOAGAMIN is indicated whenever capillary or venous bleeding presents a problem.

KOAGAMIN has an outstanding safety record -- in 25 years of use no report of an untoward reaction has been received; however, it should be used with care on patients with a predisposition to thrombosis.



KOAGAMIN®

parenteral hemostat

Each cc contains: 5 mg. oxalic acid, 2.5 mg. malonic acid, phenol 0.25%; sodium carbonate as buffer.

Complete data with each 10cc vial. Therapy chart on request.

CHATHAM PHARMACEUTICALS, INC.
Newark 2, New Jersey
Distributed in Canada by Austin Laboratories, Ltd. • Paris, Ontario



Protects your angina patient better than vasodilators alone

'Miltrate' contains both pentaerythritol tetranitrate, which dilates the patient's coronary arteries, and meprobamate, which relieves his anxiety about his condition. Thus 'Miltrate' protects your angina patient better than vasodilators alone.

Pentaerythritol tetranitrate may infrequently cause nausea and mild headache, usually transient. Slight drowsiness may occur with meprobamate and, rarely, allergic reactions. Meprobamate may increase effects of excessive alcohol. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Like all nitrate-containing drugs, 'Miltrate' should be given with caution in glaucoma.

Dosage: 1 or 2 tablets *before meals* and at bedtime. Individualization required.
Supplied: Bottles of 50 tablets.

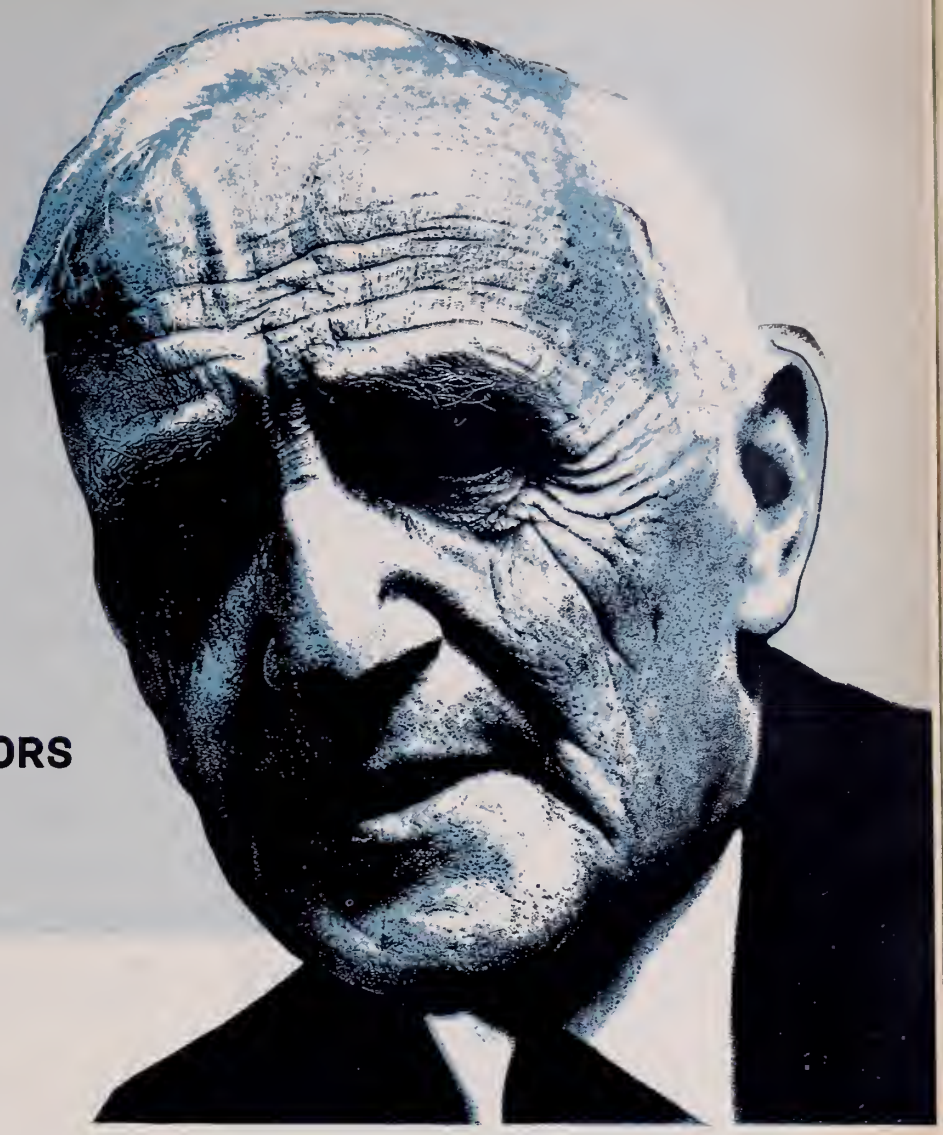
CML-9646

Miltrate®

meprobamate 200 mg.+ pentaerythritol tetranitrate 10 mg.

WALLACE LABORATORIES / *Cranbury, N. J.*

For your elderly arthritic patients



AN EFFECTIVE GERIATRIC ANTIARTHRITIC WITH ESSENTIAL SAFETY FACTORS

safely indicated – even in the presence of **HYPERGLYCEMIA**

PABALATE-SF may be prescribed with confidence to elderly arthritics—even in the presence of hyperglycemia—because of its widely recognized **Safety Factors:** (1) its potassium salts cannot contribute to sodium retention; (2) its enteric coating assures gastric tolerance; and (3) its use is free from the serious reactions in diabetic patients sometimes noted during therapy with steroids or pyrazolone derivatives. As for effectiveness, it has been found "superior to aspirin in the treatment of chronic rheumatic disorders."[1]

Each persian-rose enteric-coated tablet contains: potassium salicylate, 0.3 Gm.; potassium para-aminobenzoate, 0.3 Gm.; ascorbic acid, 50 mg.

1. Ford, R. A., and Blanchard, K. P.: J.-Lancet 78:185, 1958.

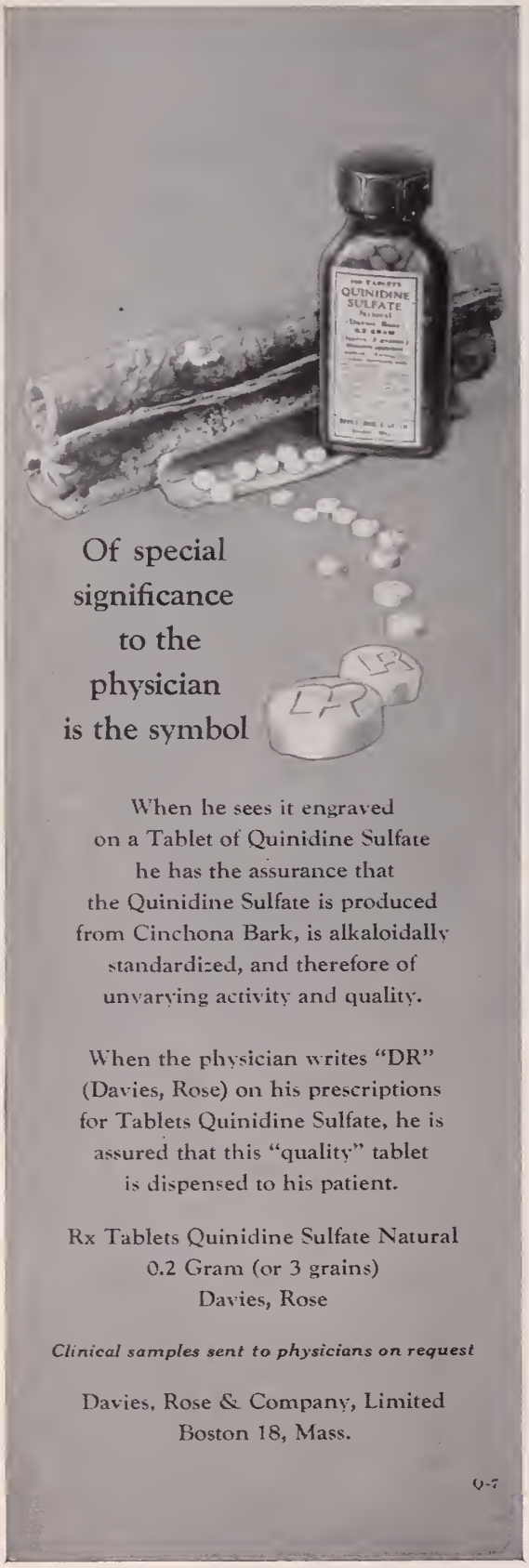
Precaution: Occasionally, mild salicylism may occur, but this responds readily to dosage adjustment. In the presence of severe renal impairment, care should be taken to avoid accumulation of salicylate and PABA. Supply: Bottles of 100 and 500 enteric-coated tablets.

Pabalate®-SF

Robins

(the new, convenient way to prescribe Pabalate-Sodium Free)

A. H. ROBINS COMPANY, INC., RICHMOND, VIRGINIA



Of special significance to the physician is the symbol

When he sees it engraved on a Tablet of Quinidine Sulfate he has the assurance that the Quinidine Sulfate is produced from Cinchona Bark, is alkaloidally standardized, and therefore of unvarying activity and quality.

When the physician writes "DR" (Davies, Rose) on his prescriptions for Tablets Quinidine Sulfate, he is assured that this "quality" tablet is dispensed to his patient.

Rx Tablets Quinidine Sulfate Natural
0.2 Gram (or 3 grains)
Davies, Rose

Clinical samples sent to physicians on request

Davies, Rose & Company, Limited
Boston 18, Mass.

Q-7

INDEX TO ADVERTISERS

American College of Cardiology 1
Ames Company, Inc. 16

Browne-McHardy Clinics 22
Burroughs Wellcome & Co. 12, 31

Chatham Pharmaceuticals, Inc. 38
Chicago Medical Society 32

Davies, Rose & Co., Ltd. 40

Endo Laboratories 21

First Texas Pharmaceuticals, Inc. 20

Geigy Pharmaceuticals 25, 26, 27, 28
Glenwood Laboratories, Inc. 32

Katz & Besthoff, Ltd. 1

Lederle Laboratories 15, 37
Lilly & Company, Eli Front Cover, 18
Louisiana Coca-Cola Bottling Co. 1
Louisiana State Board of Health Second & Third Covers

Majors Company, J. A. 1

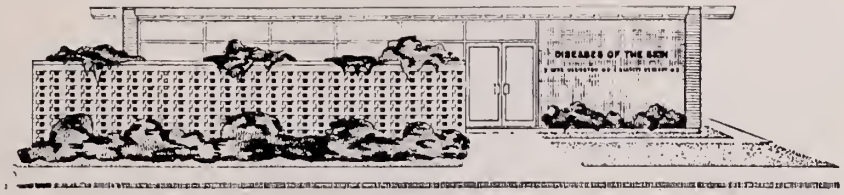
Parke, Davis & Company 6, 7
Peacock Surgical Co., Inc. 22
Professional Cards 41, 42
Professional Management Service 10

Robins Co., Inc., A. H. 3, 4, 5, 39
Roche Laboratories Back Cover
Rorer, Inc., William H. 33

Saunders Company, W. B. 13
Schering Corporation 17
Searle & Company, G. D. 19
Smith Kline & French Laboratories 30

Wallace Laboratories 8, 9, 14, 23, 29, 34, 35, 38
Winthrop Laboratories 2, 11, 24, 36

PROFESSIONAL CARDS



Courtesy Parking

Adjacent to Building

BARRETT KENNEDY, M. D.

V. MEDD HENINGTON, M. D.

WM. J. PERRET, M. D.
(Associate)

DERMATOLOGY

4522 MAGNOLIA STREET

TWinbrook 1-4452 — 1-4453

Green Clinic

709 South Vienna Street — Ruston, Louisiana

Surgery
Marvin T. Green, M.D.
LaMoyne C. Bleich, M.D.

Obstetrics and Gynecology
Carl L. Langford, M.D.
David M. Hall, M.D.

Pediatrics
Bruce W. Everist, M.D.
O. Wharton Brown, Jr., M.D.

Eye, Ear, Nose and Throat
Harold H. Harms, M.D.

Radiology
M. Ragan Green, M. D.

Internal Medicine
Henry S. Roane, M.D.
Robert W. Sharp, M.D.
Joe L. Smith, Jr., M.D.

Dentistry
L. Felton Green, D.D.S.
Benjamin C. Baugh, D.D.

The Baton Rouge Clinic

134 North 19th St. — DI 8-5361

SURGERY
Joseph Sabatier, M. D.
Charles Mosely, M. D.
Charles S. Peter, M. D.

GYNECOLOGY & OBSTETRICS
Melvin Schudmak, M. D.
J. P. Griffon, M. D.
Donald C. Diefendorf, M. D.

UROLOGY
Mortimer Silvey, M. D.
Alfred M. Holden, M. D.

CONSULTANT RADIOLOGISTS
David S. Malen, M. D.
Allie Woolfolk, M. D.

INTERNAL MEDICINE
Charles S. Prosser, M. D.
Roger Reynolds, M. D.
(Allergy)
Bruce L. Baer, M. D.
(Gastroenterology)
Douglas Gordon, M. D.
(Endocrinology)
David D. Kahn, M. D.
(Hematology)

OPHTHALMOLOGY
George H. Jones, M. D.

PHILIP RONALD LORIA, M. D.

DISEASES OF THE SKIN

Dermoplaning — **Removal of Excessive Hair**

1104 Maison Blanche Bldg. — New Orleans 16, La.
By Appointment — 524-9621

PROFESSIONAL CARDS

JOHN C. HARDIN, JR.
D.D.S., M.D., F.A.C.S.
Maxillo-Facial & Oral Surgery
(Head and Neck Surgery)
121 Physicians & Surgeons Bldg., West
Phone 423-6901 Shreveport, Louisiana

BLAISE SALATICH, D.D.S., M.D.
PRACTICE LIMITED TO ORTHOPEDIC SURGERY
1212 Maison Blanche Building
JAckson 2-7697 By Appointment

DR. NATHAN H. POLMER
Physical Medicine—Rehabilitation
2209 Carondelet St.
2 - 5 P. M.
Off.: JA 2-0171 Res.: JA 2-3946

JAMES W. BURKS, JR., M. D.
DISEASES OF THE SKIN
SURGICAL PLANING FOR COSMETIC DEFECTS
FACILITIES FOR REMOVAL OF SUPERFLUOUS HAIR
925 Maison Blanche Bldg.
New Orleans 16, La. 529-3322

DR. R. ROSS, JR.
SKIN DISEASES
802 Pere Marquette Bldg. JA 2-0202

DR. RICHARD W. VINCENT
PLASTIC AND RECONSTRUCTIVE SURGERY
34 Maes Court — Medical Plaza
3600 PRYTANIA STREET
TWinbrook 5-4561

JUSTILLIEN H. FORET, M. D.
Practice Limited to Psychiatry
3706 Prytania Street
899-2618 By Appointment

CHARLES I. BLACK, M. D.
DISEASES OF THE SKIN
4550 North Boulevard 924-6256
Baton Rouge, Louisiana

Business Management Consultants
for Individual Practices, Groups and Clinics
PROFESSIONAL MANAGEMENT SERVICE
700 Maison Blanche Bldg.
524-1177 New Orleans 16, La.

HUGH MANY, M. D.
DISEASES OF THE SKIN
4900 St. Charles Avenue 895-6700
and
Nicholson-Baehr Clinic, Marrero, La.
By Appointment 341-1300

THE OWENS CLINIC
for
PLASTIC AND RECONSTRUCTIVE SURGERY
2223 Carondelet St. New Orleans 13, La.
Telephone: JAckson 2-0106
After Hours — Call Doctors' Exchange WH 5-4141

DR. HARTWIG M. ADLER
EYE, EAR, NOSE AND THROAT
Hours by appointment.
3439 Prytania Street TW. 1-4094
New Orleans

DR. CARL N. WAHL
Practice limited to
MAXILLO-FACIAL AND PLASTIC SURGERY
4500 Magnolia Street 891-6615

FRANK H. MAREK, M. D.
Radiologist
444 So. Ryan Street Lake Charles, La.
Phone HE 3-6361
Practice Limited to
X-ray and Radium Treatment and Diagnosis

LAFAYETTE SKIN
and
SKIN CANCER CLINIC
R. H. ROBINSON, M. D., Director
608 St. Landry St. Lafayette, La.
Telephone CE 5-2405

DR. HARRY ZOLLER
HEARING AND DEAFNESS
DISEASES AND SURGERY OF THE EAR
1109 Pere Marquette Building
JA. 5-2535 By Appointment

JOHN H. COUNCE, M. D.
Diseases of the Skin
1413 Delachaise St. New Orleans
Office Hours
By Appointment TW 1-2813

FREDERIC W. BREWER, M. D.
PRACTICE LIMITED TO PSYCHIATRY
1008 Maison Blanche Building
JA 5-4047 By Appointment

The Cancer Commission of the Louisiana State Medical Society



volunteer for all seasons

There is no season for cancer. And fighting it is a year-round job for the American Cancer Society volunteer.

Particularly for you, doctor, our *key* volunteer. Your thinking, experience and guidance are responsible for the formulation of our policies and programs; your knowledge and skill are essential to their execution. And so you serve on our National, Division and Unit boards. Act on our committees. Talk to lay audiences at our film showings. Help evaluate our research grants. Advise on our professional publications. Raise funds. Assess our program materials. The list goes on and on.

The American Cancer Society keeps you busy, doctor. We depend upon you. We hope that more and more of your fellow physicians will join you in working with us—all year, every year until the fight against cancer is won.

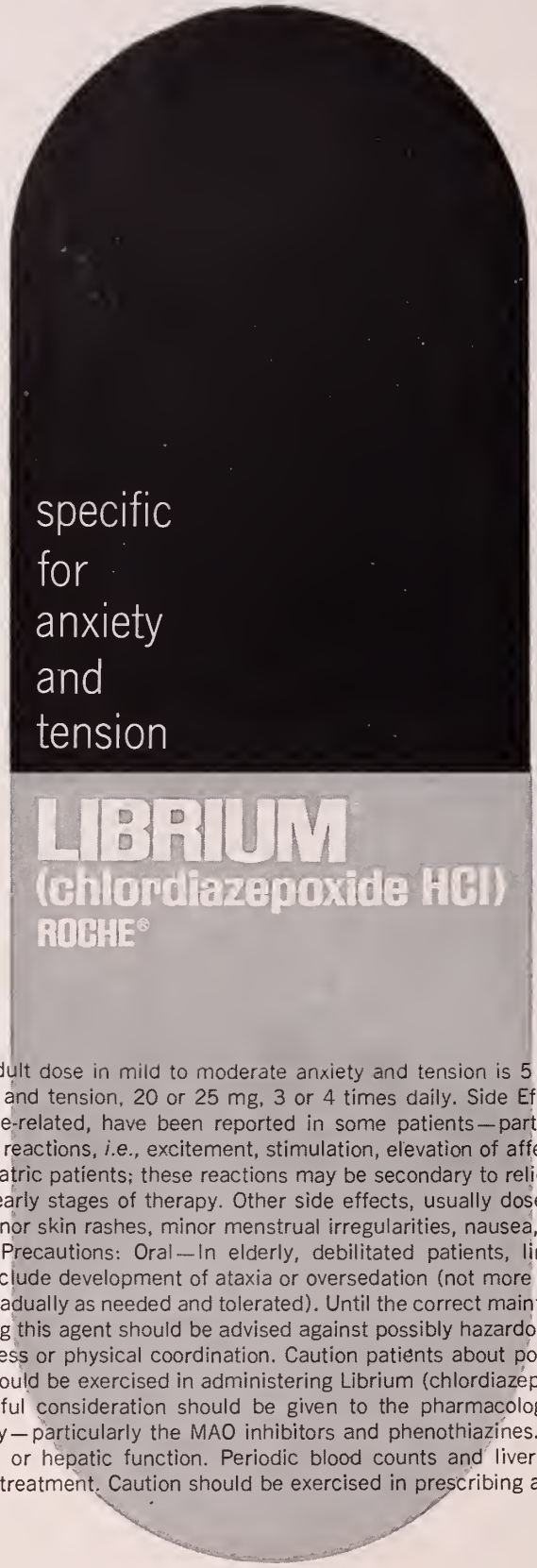
AMERICAN CANCER SOCIETY®

LOUISIANA DIVISION, INC.
204 Delta Building New Orleans 12, La.

Louisiana State Board of Health

JAMES R. STRAIN, M.D., M.P.H., *President*

ROCHE



Dosage: Oral—Usual adult dose in mild to moderate anxiety and tension is 5 or 10 mg, 3 or 4 times daily; in severe anxiety and tension, 20 or 25 mg, 3 or 4 times daily. Side Effects: Oral—Drowsiness and ataxia, usually dose-related, have been reported in some patients—particularly the elderly and debilitated. Paradoxical reactions, *i.e.*, excitement, stimulation, elevation of affect and acute rage, have been reported in psychiatric patients; these reactions may be secondary to relief of anxiety and should be watched for in the early stages of therapy. Other side effects, usually dose-related, have included isolated instances of minor skin rashes, minor menstrual irregularities, nausea, constipation, increased and decreased libido. Precautions: Oral—In elderly, debilitated patients, limit dosage to smallest effective amount to preclude development of ataxia or oversedation (not more than 10 mg per day initially, to be increased gradually as needed and tolerated). Until the correct maintenance dosage is established, patients receiving this agent should be advised against possibly hazardous procedures requiring complete mental alertness or physical coordination. Caution patients about possible combined effects with alcohol. Caution should be exercised in administering Librium (chlordiazepoxide HCl) to addiction-prone individuals. Careful consideration should be given to the pharmacology of any agents to be employed concomitantly—particularly the MAO inhibitors and phenothiazines. Observe usual precautions in impaired renal or hepatic function. Periodic blood counts and liver function tests may be advisable in protracted treatment. Caution should be exercised in prescribing any therapeutic agent to pregnant patients.

NAL of the

LOUISIANA STATE MEDICAL SOCIETY

LOUISIANA STATE MEDICAL SOCIETY

Formerly NEW ORLEANS MEDICAL and SURGICAL JOURNAL
OFFICIAL ORGAN OF THE LOUISIANA STATE MEDICAL SOCIETY

NOVEMBER, 1963

Copyright 1963 by
iana State Medical Society.
per annum, 35¢ per copy

Vol. 115, No. 11

Published monthly by
The Journal of the Louisiana State
Medical Society, Inc.
1430 Tulane Ave., New Orleans 70112

Contents



Treatability of Emotional States by the Practicing Physician 365
William F. Sheeley, M. D., F.A.P.A., Washington, D. C.

Principles of Brief Psychotherapy 374
Arthur P. Burdon, M. D., New Orleans

A Psychopath Who Killed 379
John C. Trice, M. D., Pineville, and Joel R. Butler, Ph.D., Baton Rouge

Diabetes Insipidus with Superimposed Pregnancy 383
C. J. Gulotta, M.D., W. D. Beacham, M.D., and H. D. Webster, M. D., New Orleans

A Culture Medium for the Detection of Candida Albicans in Office Practice 387
B. C. Slaughter, M. D., G. A. Davidson, M. D., and O. T. Woods, M. D., Dallas, Texas

Adventure in Continuing Medical Education 390
Rafael C. Sanchez, M. D., New Orleans

Editorial 392

Organization Section 394

Medical News Section 396

Book Reviews 398

Index to Advertisers 44

THE N.Y. ACADEMY OF MEDICINE
DEC -2 1963
LIBRARY



Announcing

The Twenty-Seventh Annual Meeting

of

THE NEW ORLEANS GRADUATE MEDICAL ASSEMBLY

Conference Headquarters — Roosevelt Hotel

March 2, 3, 4, 5, 1964

GUEST SPEAKERS

Nicholas M. Greene, M. D., New Haven, Conn.
Anesthesiology

Adolph Rostenberg, Jr., M. D., Chicago, Ill.
Dermatology

Arthur P. Klotz, M. D., Kansas City, Kans.
Gastroenterology

J. Roswell Gallagher, M. D., Boston, Mass.
General Practice

Roger B. Scott, M. D., Cleveland, Ohio
Gynecology

George R. Herrmann, M. D., Galveston, Tex.
Internal Medicine

William C. Thomas, Jr., M. D., Gainesville, Fla.
Internal Medicine

John B. Reckless, M. D., Durham, N. C.
Neuropsychiatry

Robert A. Cosgrove, M. D., Jersey City, N. J.
Obstetrics

Roy O. Scholz, M. D., Baltimore, Md.
Ophthalmology

Otto E. Aufranc, M. D., Boston, Mass.
Orthopedic Surgery

Paul H. Holinger, M. D., Chicago, Ill.
Otolaryngology

Paul K. Lund, M. D., Seattle, Wash.
Pathology

Margaret Lyman, M. D., New York, N. Y.
Pediatrics

David S. Carroll, M. D., Memphis, Tenn.
Radiology

C. Barber Mueller, M. D., Syracuse, N. Y.
Surgery

Lloyd M. Nyhus, M. D., Seattle, Wash.
Surgery

John K. Lattimer, M. D., New York, N. Y.
Urology

The Lawson Memorial Lecture
I. S. Ravdin, M. D., Philadelphia, Pa.

Lectures, symposia, clinicopathologic conferences, round-table luncheons, medical motion pictures, technical exhibits and entertainment for visiting wives.

(All-inclusive registration fee — $20.00)

THE CLINICAL TOUR TO EUROPE VISITING LISBON, MADRID, ROME, VIENNA, BERLIN AND PARIS

Leaving March 7 via air and returning March 28, 1964

For information concerning the Assembly meeting and tour write Secretary, N. O. Graduate Medical Assembly, 1430 Tulane Avenue, New Orleans, La. 70112

Louisiana State Board of Health

JAMES R. STRAIN, M. D., M. P. H.

President



BOTTLED UNDER AUTHORITY OF THE COCA-COLA COMPANY BY
THE LOUISIANA COCA-COLA BOTTLING CO., LTD.



You Know--

that we know!

TRUSTED MANY MILLIONS OF TIMES

GOOD DRUG STORES — ONLY THE BEST

Katz & Besthoff, Inc.

Prescription Headquarters Since 1905

AMERICAN COLLEGE OF
CARDIOLOGY

"THE MARDI GRAS CONVENTION"

(Thirteenth Annual Convention)

February 12-16, 1964

Roosevelt Hotel, New Orleans, Louisiana

MEDICAL BOOKS

Of All Publishers

Any book on Medicine, Surgery, and Nursing

J. A. MAJORS COMPANY

147 South Liberty St.

NEW ORLEANS 12, LA.

——Catalogs cheerfully sent upon request——

"What type of drug is both a tranquilizer and a muscle relaxant?"

"a tranquilaxant."

TRANCOPAL®

brand of

chlormezanone

is a tranquilaxant

As a tranquilizer, TRANCOPAL (chlormezanone-Winthrop) "is effective in the symptomatic treatment of anxiety."[1] Its tranquilizing properties are similar to those of other mild tranquilizers. Furthermore, it relieves tension of both mind and muscle without interfering with normal activity or alertness.

The muscle relaxant properties of this drug provide an extra dimension of effectiveness... relaxing the spasm which so frequently accompanies psychogenic disorders. Hence, the total therapeutic effect of this true "tranquilaxant" is to produce a relaxed mind in a relaxed body.

Unsurpassed Tolerance: Less than 3 per cent of patients develop side effects with TRANCOPAL (chlormezanone-Winthrop), such as occasional drowsiness, dizziness, flushing, nausea, depression, weakness and drug rash. If severe, medication should be discontinued. In most patients, however, side effects are minor and do not necessitate interruption of treatment. There are no known contraindications.

Available: 200 mg. Caplets® (green colored, scored). 100 mg. Caplets (peach colored, scored), each in bottles of 100.

Dosage: Adults, 1 Caplet (200 mg.) three or four times daily; in some patients 100 mg. three or four times daily suffices. Children (5 to 12 years), from 50 to 100 mg. three or four times daily.

Reference: 1. A.M.A. Council on Drugs: J.A.M.A. 183:469 (Feb. 9) 1963.

Winthrop

WINTHROP LABORATORIES
New York, N. Y.

1913-M



winter coughs ahead...
clear the tract with Robitussin®

ROBITUSSIN®
Each 5 cc. tsp. contains:
Glyceryl guaiacolate 100 mg.

ROBITUSSIN® A-C
Robitussin with antihistamine and codeine.
Each 5 cc. tsp. contains:
Glyceryl guaiacolate 100 mg.
Pheniramine maleate 7.5 mg.
Codeine phosphate 10 mg.
(exempt narcotic)

Photo: N. & W. Engine No. 611, last of the famous "Class J" locomotives, on its final run between Roanoke, Va., and Williamson, W. Va., Oct. 26, 1959.



For the coughing patient who labors to remove tenacious mucus from his respiratory tract, Robitussin provides a remarkably potent expectorant action. It contains glyceryl guaiacolate which increases respiratory tract fluid (R.T.F.) almost 200% to "clear the tract" of cough-inducing irritants. Increased R.T.F. also permits more efficient action of bronchial and tracheal cilia to further enhance the evacuation of sputum, thus reducing cough frequency and helping the cough remove its cause.

After more than thirteen years and millions of prescriptions, no serious side effects have been reported from Robitussin. And patient acceptance has been outstanding.

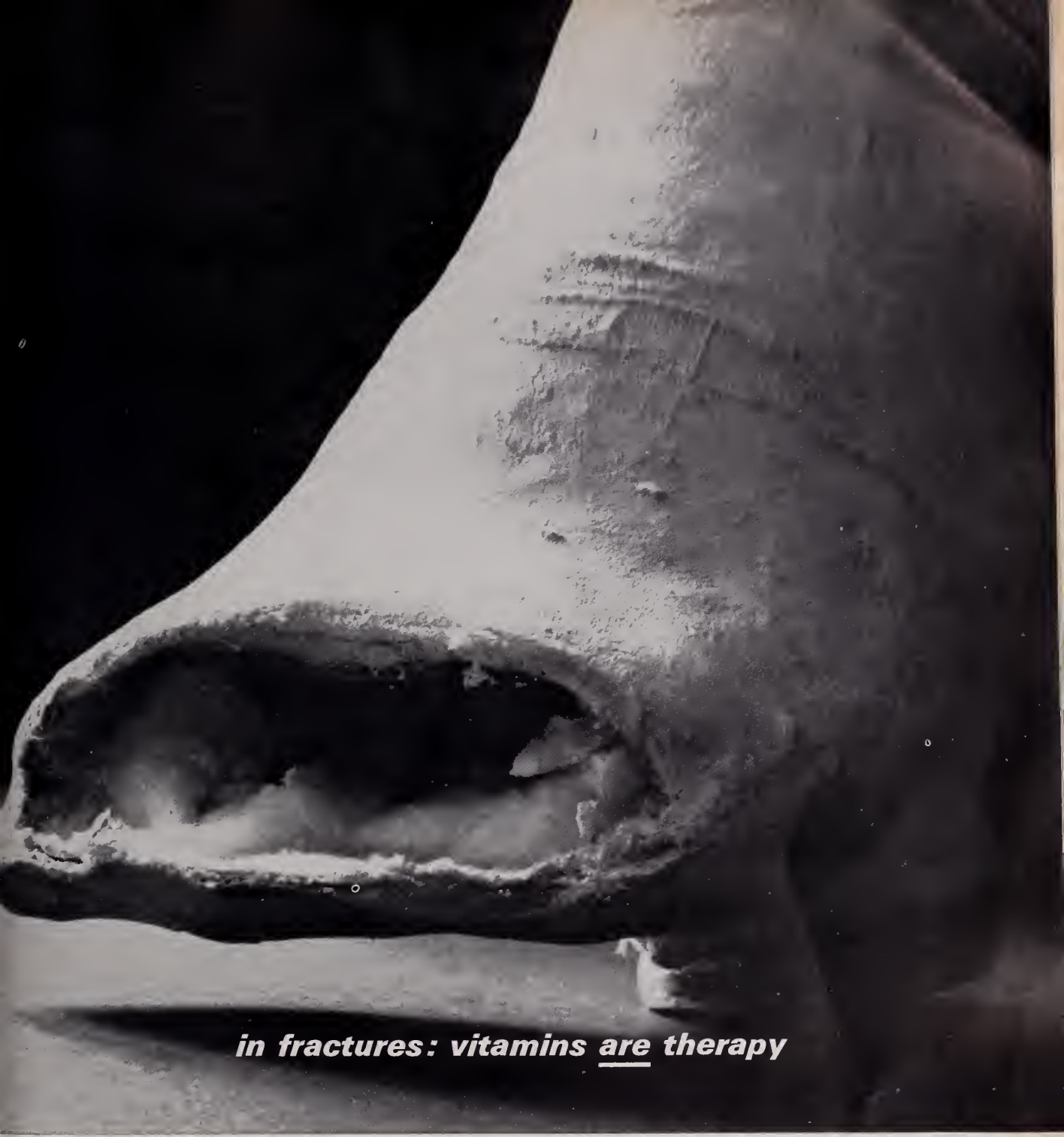
A. H. ROBINS COMPANY, INC., Richmond 20, Virginia

This is the season Allbee® with C is made for!



When a good old-fashioned winter proves too much for your modern-day patients, it's a comfort to know about Allbee with C. Consider its simple, rational, economical formula when patients need therapeutic amounts of B and C vitamins during the "flu" and u.r.i. season. **This is what Allbee with C is made of:** Thiamine mononitrate (B_1), 15 mg.; Riboflavin (B_2), 10 mg.; Pyridoxine HCl (B_6), 5 mg.; Nicotinamide, 50 mg.; Calcium pantothenate, 10 mg.; Ascorbic acid (vitamin C), 300 mg.

A. H. Robins, Co., Inc. Richmond 20, Va.



Few factors are more fundamental to tissue and bone healing than nutrition. Therapeutic allowances of B and C vitamins are important for rapid replenishment of vitamin reserves which may be depleted by the stress of fractures. Metabolic support with STRESSCAPS is a useful adjunct to an uneventful recovery.

FOR PROFESSIONAL

RECOMMENDATION ONLY

Each capsule contains: Vitamin B_1 (Thiamine Mononitrate)...10 mg. / Vitamin B_2 (Riboflavin)...10 mg. / Niacinamide... 100 mg. / Vitamin C (Ascorbic Acid)...300 mg. / Vitamin B_6 (Pyridoxine HCl)...2 mg. / Vitamin B_{12} Crystalline... 4 mcgm. / Calcium Pantothenate...20 mg. Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100.

Lederle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.

6317-3

STRESSCAPS®

Stress Formula Vitamins Lederle



Helps to make the epileptic's life more meaningful

Dilantin® Kapseals (Diphenylhydantoin sodium)

PARKE-DAVIS

With modern, intelligent therapy, epilepsy has an excellent prognosis. "Well over 90 per cent of the patients can be adequately controlled so that they can lead a normal life and take a useful and respectable position in society."[1]

Diphenylhydantoin sodium is generally regarded as the standard in anticonvulsant medication because of its effectiveness in controlling grand mal and psychomotor seizures.[2-10] It possesses a wide margin of safety, and the incidence of side effects is minimal.[4] With this agent, oversedation is not a problem.[3] Moreover, its use is often accompanied by improvement in the patient's memory, intellectual performance, and emotional stability.[11]

Indications: Grand mal epilepsy and certain other convulsive states. *Precautions:* Toxic effects are infrequent: allergic phenomena such as polyarthropathy, fever, skin eruptions, and acute generalized morbilliform eruptions with or without fever. Rarely, dermatitis goes on to exfoliation with hepatitis, and further dosage is contraindicated. Eruptions then usually subside. Though mild and rarely an indication for stopping dosage, gingival hypertrophy, hirsutism, and excessive motor activity are occasionally encountered, especially in children, adolescents, and young adults. During initial treatment, minor side effects may include gastric distress, nausea, weight loss, transient nervousness, sleeplessness, and a feeling of unsteadiness. All usually subside with continued use. Megaloblastic anemia, aplastic anemia, leukopenia, agranulocytopenia, and pancytopenia have been reported. Nystagmus may develop. Nystagmus in combination with diplopia and ataxia indicates dosage should be reduced. Periodic examination of the blood is advisable.

DILANTIN (diphenylhydantoin sodium) is available in Kapseals of 0.03 Gm. and 0.1 Gm., bottles of 100 and 1000.

REFERENCES: (1) Maltby, G. L.: *J. Maine M.A.* 48:257, 1957. (2) Roseman, E.: *Neurology* 11:912, 1961. (3) Bray, P. F.: *Pediatrics* 23:151, 1959. (4) Chao, D. H.; Druckman, R., & Kellaway, P.: Convulsive Disorders of Children, Philadelphia, W. B. Saunders Company, 1958, p. 120. (5) Crawley, J. W.: *M. Clin. North America* 42:317, 1958. (6) Livingston, S.: The Diagnosis and Treatment of Convulsive Disorders in Children, Springfield, Ill., Charles C Thomas, 1954, p. 190. (7) *Ibid.*: *Postgrad. Med.* 20:584, 1956. (8) Merritt, H. H.: *Brit. M. J.* 1:666, 1958. (9) Carter, C. H.: *Arch. Neurol. & Psychiat.* 79:136, 1958. (10) Thomas, M. H., in Green, J. R., & Steelman, H. F.: Epileptic Seizures, Baltimore, The Williams & Wilkins Company, 1956, pp. 37-48. (11) Goodman, L. S., & Gilman, A.: The Pharmacological Basis of Therapeutics, ed. 2, New York, The Macmillan Company, 1955, p. 187.

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

Ts163


RECOGNIZE
THIS PATIENT?
"I don't sleep well . . . I dream a lot . . . wake up tired and irritable. I don't have any appetite . . . I'll never be cured."

When you recognize signs of depression and anxiety and associate them with an organic condition—add 'Deprol' to your therapy.

Typical conditions in which 'Deprol' should be considered for control of the associated depression and anxiety:

Cancer ■ Cardiovascular disorders ■ Arthritis ■ Menopause ■ Alcoholism ■ Obesity ■ Asthma, hay fever and related allergies ■ Chronic infectious diseases ■ Pregnancy and post partum ■ Dermatoses ■ G.I. disorders, and many other organic disturbances.

When you recognize depression and anxiety traceable to an emotionally charged situation with no somatic disorder—start the patient on 'Deprol'.

Typical situations in which 'Deprol' is indicated:

Fear of cancer or other life-threatening disease ■ Pre- and post-operative fears ■ Marital problems ■ Death of a loved one ■ Loss of work ■ Retirement problems ■ Financial worries, and many other stressful situations.

Deprol®

meprobamate 400 mg. + benactyzine hydrochloride 1 mg.

BRIEF SUMMARY: *Indications:* Depression, especially when accompanied by anxiety, tension, agitation, rumination or insomnia. *Side Effects:* Slight drowsiness and, rarely, allergic reactions, due to meprobamate, and occasional dizziness or feeling of depersonalization in higher dosage, due to benactyzine, may occur. Meprobamate may increase effects of excessive alcohol. Use with care in patients with suicidal tendencies. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Withdraw gradually after prolonged use at high dosage. *Complete product information available to physicians on request.*

USUAL ADULT DOSAGE: 1 tablet q.i.d. May be increased gradually, as needed, to 3 tablets q.i.d.; with establishment of relief, may be reduced gradually to maintenance levels.

SUPPLIED: Light-pink, scored tablets. Bottles of 50.

WALLACE LABORATORIES / *Cranbury, N. J.*

CD-9689

PROFESSIONAL MANAGEMENT SERVICE CAN HELP YOU BE A

FULL-TIME DOCTOR



Delegation of time-consuming work not requiring your training and experience releases you to more productive and rewarding work only you can do. The Professional Management Service is equipped to save you time . . . to relieve you and your staff of both menial and critical business tasks . . . and to increase your income. Our service offers you the benefits of specially trained, and equipped personnel under the careful supervision of specialists in medical business management, however you maintain complete control of your business activities!

We Offer These Services -

ACCOUNTS RECEIVABLE MANAGEMENT Professional Management Service trained bookkeepers, electric equipment and modern, proven-in-use methods designed to the needs of medical accounts are used to minimize the business workload in your office. Professional, accurate, itemized statements encourage prompt payment. This service pays big dividends in good will, time savings and net dollar return.

CONSULTATION Professional Management Service also includes special services, as needed, such as counseling on all insurance, investments, office personnel, fees, office lay-out, etc.

BASIC BOOKKEEPING SERVICE Formal accounting records are maintained by Professional Management Service. This includes income and expenses, depreciation, capital accounts, monthly financial report and tax return preparation.

PRE-COLLECTION PROGRAM A constructve approach to slow-paying accounts, subject to your control, this service is used with the ARM Service, above, or to supplement billing by your own staff. Custom designed to your needs and policies, but all time-consuming work is done by Professional Management Service.

COMPREHENSIVE BUSINESS SERVICE Most beneficial to physicians is the assumption of the complete business side of practice by the Professional Management Service in a co-ordinated, comprehensive service encompassing all functions named above.

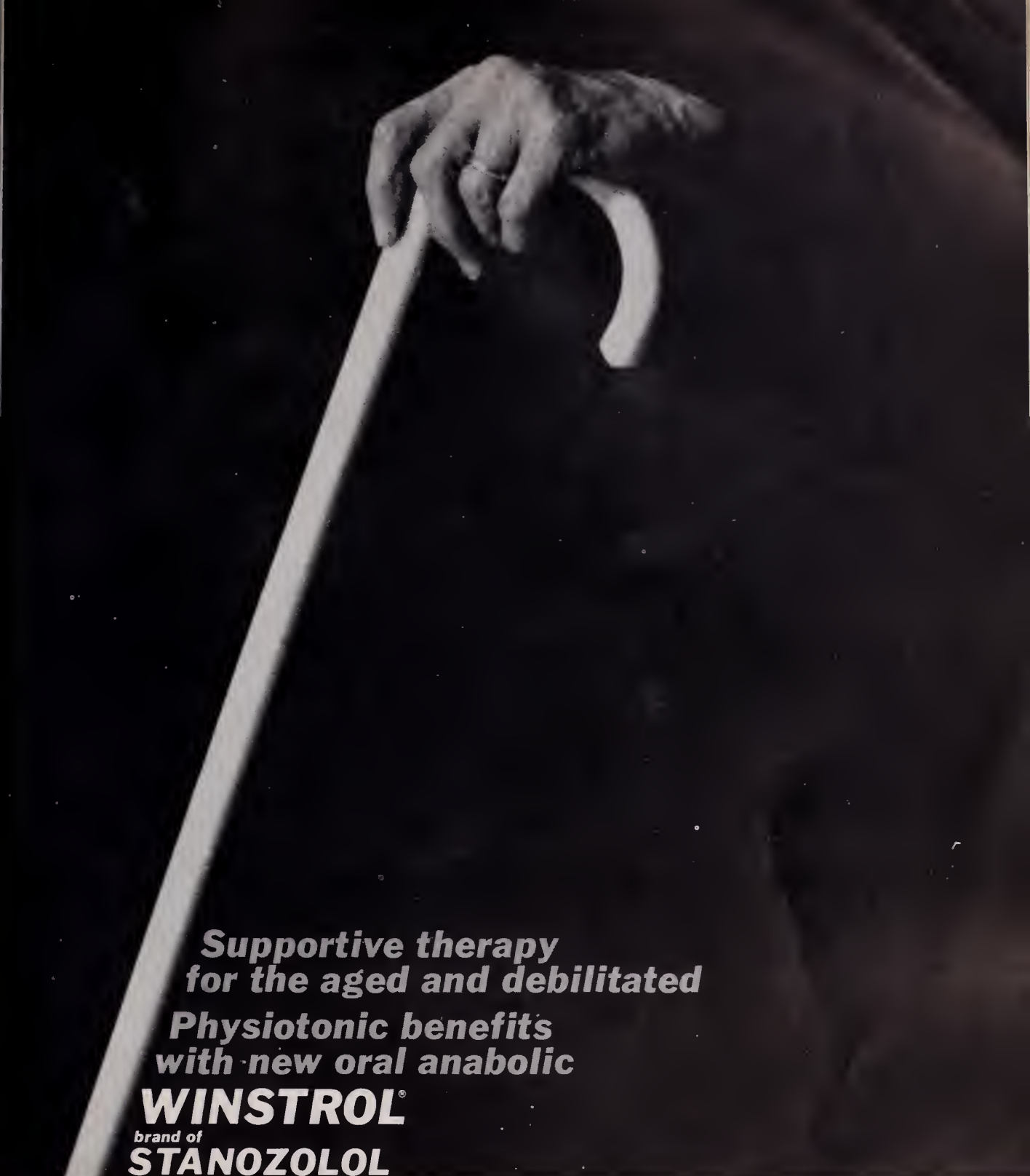


PROFESSIONAL MANAGEMENT SERVICE

New Orleans, Louisiana

700 MAISON BLANCHE BLDG., PHONE 524 1177

A Specialized Service . . . Exclusively Professional



Notable increase in vigor, strength and sense of well-being

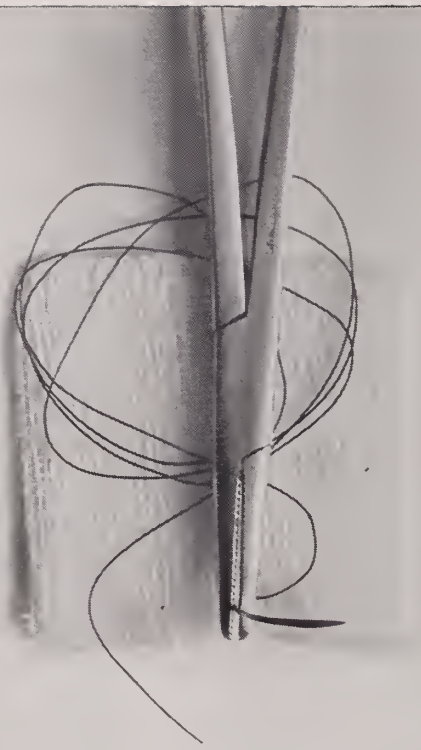
ROL (stanozolol-Winthrop), a heterocyclic steroid, combines anabolic effects with outstanding tolerance, stimulates appe- d promotes weight gain ... restores a positive metabolic balance. nteracts the catabolic effects of concomitant corticosteroid or therapy. WINSTROL (stanozolol-Winthrop) rebuilds body tissue t builds strength, confidence and a sense of well-being in con- s associated with excess protein breakdown, insufficient protein and inadequate nitrogen and mineral retention.

ffects and Precautions: Prolonged administration can produce irsutism, acne or voice change. In an occasional patient, edema een observed and in young women the menstrual periods have milder and shorter. These side effects are reversible, and pa- receiving prolonged treatment should be examined and ques- tioned periodically so that, should side effects appear, the dosage may be reduced or administration of the drug discontinued for a time. In patients with impaired cardiac and renal function, there is the possibility of sodium and water retention. Liver function tests may reveal an increase in bromsulphalein retention, particularly in elderly patients. In such cases, therapy should be discontinued. Although it has been used in patients with cancer of the prostate, its mild androgenic activity is considered by some investigators to be a contraindication.

Dosage: Usual adult dose, 1 tablet t.i.d. before or with meals; young women, 1 tablet b.i.d.; children (school age): up to 1 tablet t.i.d.; children (pre-school age): ½ tablet b.i.d. Available as scored tablets of 2 mg. in bottles of 100. For best results, administer with a high protein diet.

WINTHROP LABORATORIES, NEW YORK 18, N. Y.

rked improvement in appetite / Measurable weight gain Winthrop



In trauma,
whether it's
sutures, plaster,
splint or sling...

remember
'Empirin'
Compound
to relieve pain



Also: 'Empirin'® Compound with Codeine Phosphate*
gr. ⅛—No. 1/gr. ¼—No. 2/gr. ½—No. 3/gr. 1—No. 4
*Warning—may be habit forming



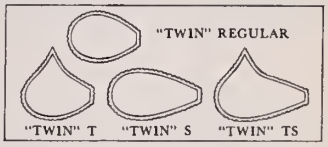
Custom-fitted to prescription instructions

Lov-é brassieres provide correct physiological support because they are custom-fitted to your precise instructions. They give gentle-yet-firm support, more youthful, normal contours and freedom from shoulder strap strain for even the most difficult problem figures. And after breast surgery, the exclusive, patented Lov-é "Twin" creates natural restoration for perfect confidence. Also a complete line of maternity, nursing, sleeping bras and hospital binders. All with the gentle femininity that women appreciate. Have your nurse call for post-mastectomy exercise charts and literature.

Lov-é

CUSTOM-FITTED BRASSIERES

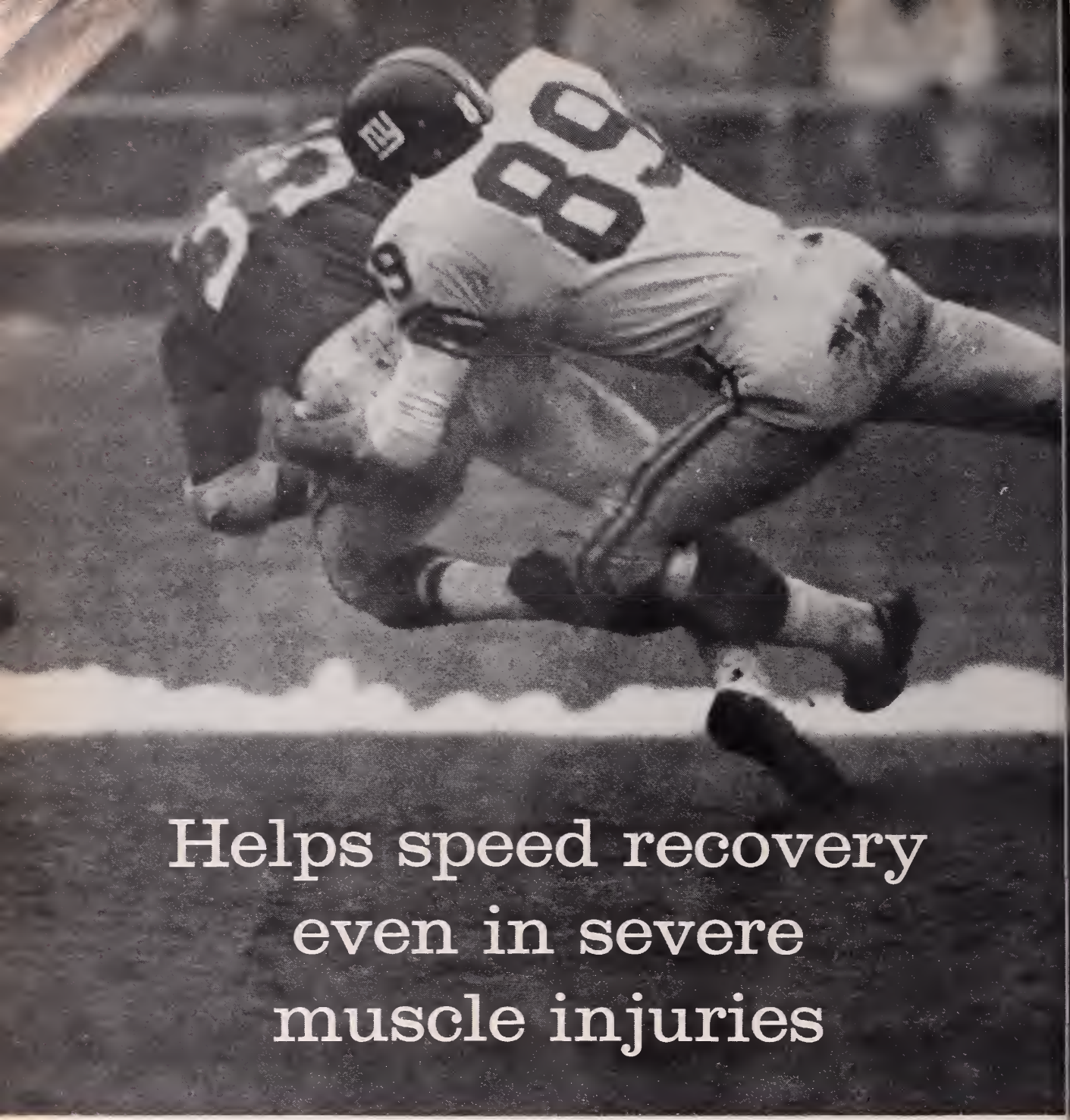
7494 Santa Monica Boulevard
Hollywood 46, California



The Lov-é "Twin" is non-liquid and features adjustable weight for perfect balance, sculptured aerated latex, lace-edged removable cover; 4 basic shapes, 28 size variations and unconditional guarantee. Ideal for all activities, even swimming.

Trained Lov-é fitters in this fine store:

ETHEL CRAIG CORSET SHOP, 1530 Delachaise Street, New Orleans, Telephone: TWinbrook 9-5571



Helps speed recovery even in severe muscle injuries

Whether your muscle-injury patient is a professional athlete or just a weekend golfer, you can expect rapid results with 'Soma' (carisoprodol).

This unique drug breaks up both muscle spasm and pain at the same time. Onset of action takes only 30 minutes, and your patient will usually begin to feel better within hours.

As Conant demonstrated in a study of 106 patients with musculoskeletal injuries, 88% of the patients treated with 'Soma' (carisoprodol) achieved good to excellent results. *(Clinical Medicine,* March, 1962.)

Carisoprodol seldom produces side effects. Occasional drowsiness may occur, usually at higher than recommended dosage. Individual reactions may occur rarely. For severe athletic strains or everyday sprains, you can rely on 'Soma' (carisoprodol) to help speed recovery with notable safety.

USUAL DOSAGE: ONE 350 MG. TABLET Q.I.D.

The muscle relaxant with
an independent pain-relieving action

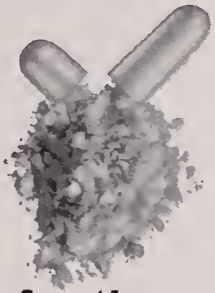
Soma®
carisoprodol

Wallace Laboratories, Cranbury, New Jersey

why does 150 mg.



do more than 250 mg.



of other tetracyclines?

Because it has up to 3½ times the *in vitro* antibacterial activity[1]...combined with lower rate of decay in serum, slower renal clearance...a favorable depot effect, resulting from protein binding...all providing rapid, higher and sustained *in vivo* activity with as much as 2 days' extra activity.

DECLOMYCIN®

DEMETHYLCHLORTETRACYCLINE HCl

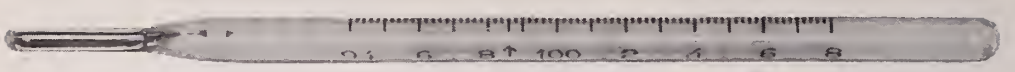
Effective in a wide range of everyday infections—respiratory, urinary tract and others—in the young and aged—the acutely or chronically ill—when the offending organisms are tetracycline-sensitive. *Side Effects* typical of tetracyclines which may occur: glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis, dermatitis, overgrowth of nonsusceptible organisms. Also: photodynamic reaction (making avoidance of direct sunlight advisable) and, very rarely, anaphylactoid reaction. Reduce dosage in impaired renal function. *Capsules*, 150 mg. and 75 mg. of demethylchlortetracycline HCl. *Average Adult Daily Dosage:* 150 mg. q.i.d. or 300 mg. b.i.d. 1. Sweeney, W. M.; Dornbush, A. C., and Hardy, S. M.: Demethylchlortetracycline and Tetracycline Compared. Relative *in vitro* Activity and Comparative Serum Concentrations During 7 Days of Continuous Therapy. *Amer. J. Med. Sci.* 243:296 (Mar.) 1962.

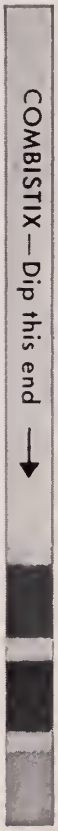
LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

7185-3

Lederle

one answer... three minutes





three answers ...ten seconds

DIP AND READ

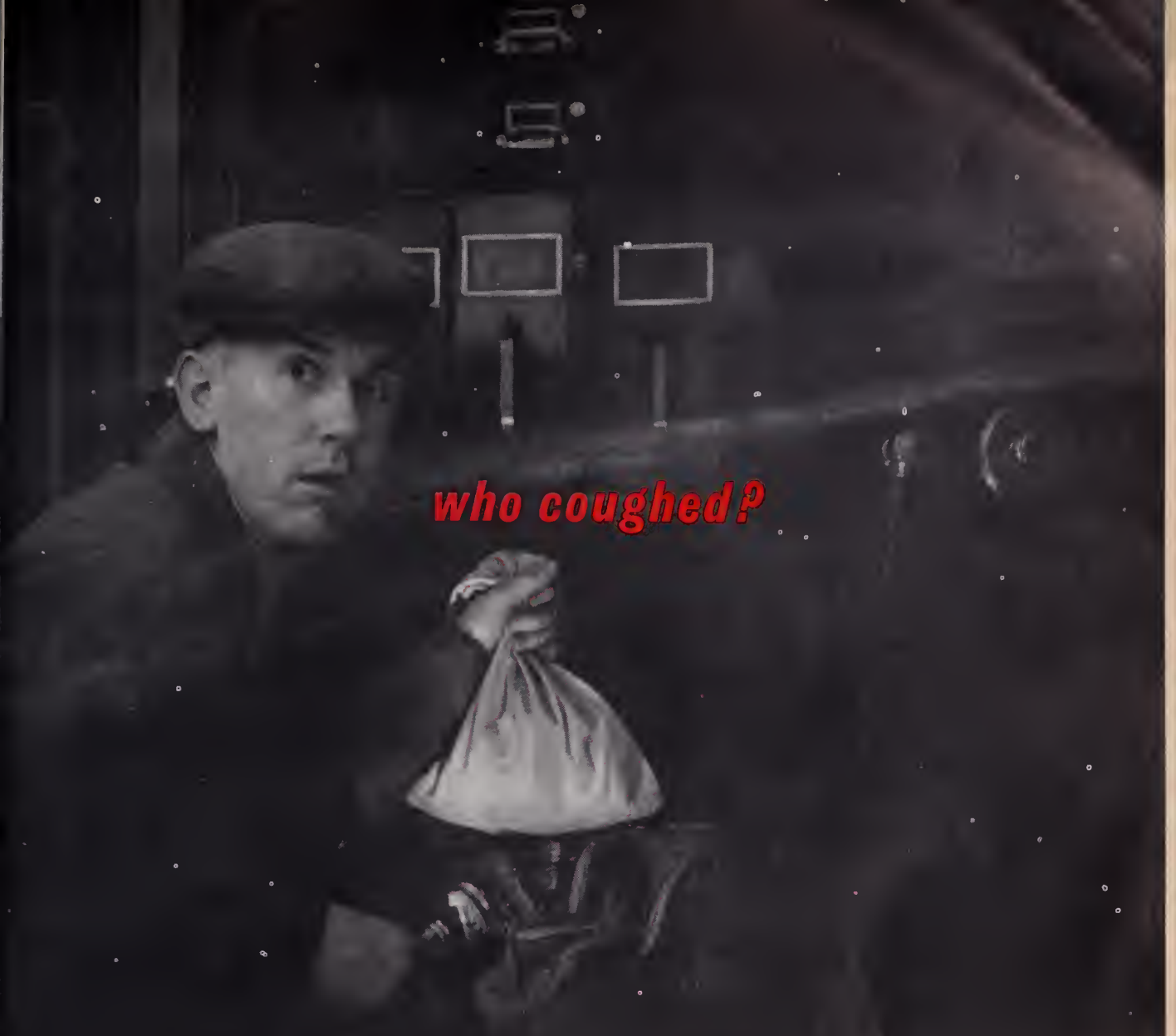
combistix®

urine protein • glucose • pH

BASIC COMBINATION TEST FOR BEDSIDE AND OFFICE

... faster than taking temperature. Detects glucosuria (as in diabetes), proteinuria (as in renal disorder), abnormal pH (as in calcinosis or GU infection). For routine screening of all patients.
COMBISTIX—*basic as the stethoscope.*
AMES products are available through your regular supplier. 38263

AMES
COMPANY INC
Elkhart • Indiana
Toronto • Canada



for fast and long-lasting cough control

HYCOMINE® SYRUP

Each teaspoonful (5 cc.) contains:

Hycodan®	
Hydrocodone bitartrate . . 5 mg.	6.5 mg.
(Warning: May be habit-forming)	
Homatropine methylbromide 1.5 mg.	
Pyrilamine maleate	12.5 mg.
Phenylephrine hydrochloride	10 mg.
Ammonium chloride	60 mg.
Sodium citrate	85 mg.

in a highly palatable, cherry-flavored vehicle (methylparaben 0.13% and propylparaben 0.02% as preservatives)

INDICATIONS: For both productive and nonproductive cough. For relief of symptoms in tracheitis, bronchitis, pneumonia, pharyngitis, bronchial asthma, pertussis, and allied conditions; cough associated with allergy; in general, whenever cough medication is indicated.

DOSAGE: Average adult dose—1 teaspoonful after meals and at bedtime with food. Children 6 to 12 years, ½ teaspoonful; 3 to 6 years, ¼ teaspoonful; 1 to 3 years, 10 drops; 6 months to 1 year, 5 drops; after meals and at bedtime. On oral Rx where state laws permit. U.S. Pat. 2,630,400.

CAUTION: Should be used with caution in patients with known idiosyncrasies to phenylephrine HCl and in patients with moderate or severe hypertension, hyperthyroidism or advanced arteriosclerosis. In these patients use should not exceed three days. Hycomine Syrup is generally well tolerated but in some patients drowsiness, dizziness or nausea may occur. May be habit-forming.

Endo®

Literature on request

ENDO LABORATORIES Richmond Hill 18, New York



Empty capsules are filled by the finest precision machinery available . . . but no machine is perfect. That's why all Lilly Pulvules® (filled capsules) are given the "thirty-minute checkup" to be certain that uniformity is maintained. At least once every thirty minutes ten filled capsules are taken from each machine and carefully weighed on a prescription balance. In addition, the checks are double-checked at least four times each day . . . another of the many stringent controls which assure you that the Lilly products you prescribe provide quality that merits the full measure of your confidence.

Eli Lilly and Company • Indianapolis 6, Indiana, U.S.A.

Lilly

300680

The Journal

of the

Louisiana State Medical Society

$4.00 Per Annum, 35c Per Copy
Vol. 115, No. 11

NOVEMBER, 1963

Published Monthly
1430 Tulane Avenue, New Orleans, La., 70112

Treatability of Emotional States By the Practicing Physician*

• This essay on the position of the practicing physician outlines the emotional situation in which he can be helpful. The special value and advantage of treatment by one who knows the somatic and the psychologic background of the patient are stressed.

WILLIAM F. SHEELEY, M. D., F.A.P.A.†
Washington, D. C.

CERTAIN psychiatric disorders are treated as well by the non-psychiatrist physician as by the psychiatrist, if not better. These disorders include those which develop in reaction to situational stresses, psychosomatic disorders, chronic and fixed psychiatric illnesses, acute psychiatric illness, and many types of psychiatric emergency.

Situational Stresses

Situational stresses which produce psychiatric disorders, and against which the family doctor can protect his patients, include painful and threatening somatic illness, loss of prized objects, intrafamilial conflicts, and conflicts between the patient and his community. An example of such stress which has psychiatric implications and to which many patients are exposed is the surgical operation. Concerning this threat, Maholik and Shapiro[18] say:

> Physicians have become . . . competent in assessing the physiological status of the patient prior to surgery. A similar presurgical . . . competence in assessing his emotional status must also be developed . . . (Even) minor surgical operations have deep emotional significance to the patient. The surgeon . . . may find that the operation has been successful but the patient is burdened with a deep depression . . . more devastating than the original physical ailment.

Another stress, personal loss, may derive from the death of a beloved spouse or child. But it may also be the loss of other prized objects, of more or less abstract nature. For example, business reverses, loss of social position, and even forced occupational retirement often have great psychological impact.

Emotionally unsettling conflict within the family may stem from one member's efforts to dominate another, or his refusal to offer adequate love. Conflict with elements of the community include periods of upheaval, such as strikes, and difficulties with the law which may or may not have been precipitated by the patient himself.

* Presented at Psychiatry for the Non-psychiatrist Lecture Series, sponsored by Touro Infirmary, New Orleans, Department of Neurology and Psychiatry, September 16, 1963.

† Chief, General Practitioner Education Project, American Psychiatric Association, Washington, D. C.

Psychosomatic Disorders

Many of the so-called psychosomatic illnesses, such as peptic ulcer, colitis, headaches, dermatitis, and some coronary disorders, are much affected by emotional states, but are best treated by the practicing physician. Papers in medical journals have even ascribed to the cardiac patient a special personality, which they have described in the following terms:

1) *those centering around life goals*, such as: overstrives, need to excel, ambitions, never stops, never satisfied, oriented to effort, time urgency, unremitting work, compulsion to speed up, conscientious, goal-directed, obsessive-compulsive, perfectionistic, hyper-reactors, and devoted to duty;

2a) *controlled hostile*, such as: unable to express aggression and hostility, tightly restrained, controlled rage and hostility, unresolved conflicts, and inadequate discharge of verbal and motor activity;

2b) *passive*, such as: avoids conflict, easy-going, dependent, feelings of inadequacy, noncommittal, passive, anxious, insecure, need to please, great need for and respect for authority, depressive moods, and subnormal assertiveness;

3) *defense mechanisms*, such as: neglects health, denies dependency needs, rejects illness, minimizes symptoms, and nonawareness of bodily symptoms.

Speaking of colitis, Crohn[10] suggests that adolescents' competition for admission into the best colleges may precipitate illness. And when studying 37 women who had urinary retention without demonstrable organic causes, Larson[14] discovered that they had in common the following characteristics (paraphrased):

1) History of urologic problems,

2) Medical or psychological trauma just prior to the retention,

3) Multiple somatic complaints and history of poly-surgery, and

4) Serious psychiatric illness which included not only hysteria but schizophrenia and depression.

Even those somatic illnesses usually considered primarily of organic cause may be aggravated by emotional conflicts. Asthma and diabetes, for example, are affected by emotional conditions. So is epilepsy. Of it Arieff[4] says:

1) A patient's psychological reaction to his seizures is most prevalent, and may disable him, i.e., he may fear having a seizure, even though he may have become spell-free. His anxiety may increase to . . . mental depression. . . .

2) Non-acceptance of illness, as a part of "denial of illness," may be quite disabling, because the patient then refuses to take or follow treatment. . . .

3) The attack, itself, may be a psychiatric problem, as in some types of temporal lobe seizures. . . .

4) Postictal states may represent psychiatric abnormality, so that the patient may behave in a clouded, confused fashion or he may even be psychotic.

Chronic Psychiatric Illness

Many chronic and psychiatric illnesses such as psychoses, personality disorders, alcoholism and drug addiction, and neuroses, need treatment by the family doctor. As a family doctor, he can protect psychotic patients from their families. Schizophrenic patients, for example, suffer when their parents do not understand them adequately, for as Slavson[22] has found

> . . . parents [are] not cognizant of the real nature of the illness of their [schizophrenic] children; they [are] not aware of the children's fragility and limited capabilities for school achievement and for establishing social relations. . . . This unfeeling and insensitive treatment [serves] to increase the children's anxiety, enhancing their sense of failure, worthlessness, defeat and doom, and intensifying their rebellion and hostility.

The urgent need for the family doctor to give therapy that psychiatrists are numerically unable to provide for alcoholism is underscored by Bell's[6] estimate that " . . . there are approximately 4,500,000 problem drinkers in this country today of whom over 800,000 are chronic alcoholics." Such numbers, of course, are more than enough to saturate all existing formal psychiatric facilities.

Acute, Transient Psychiatric Illness

The practicing physician need not limit his ministrations to situational and chronic psychiatric illness, however. He can become competent to treat acute states such as exacerbations of psychoses, depressions, and anxiety reactions. He not only can manage many post partum psychoses after they develop, for example, but by knowing a woman for many years, and by observing her understandingly during her

pregnancy, he can anticipate the danger of post partum complication. In this connection, in the background of women who suffer depressive or schizophrenic breakdown after delivery, Landgraf[13] found, there is

> . . . generally a perfectionistic, rather intolerant, cyclothymic, guilt-ridden mother or father, . . . who is reasonably close . . . to her children. . . . A new mother from such a background may develop a severe, even a psychotic depression . . . following delivery.
>
> . . . parents who are distant, rather cold, rejecting unclear and, again, fear-ridden, may have a child who later, under stress, develops a schizophrenic illness. A common factor in both is an unhealthy sexual adjustment.

The family physician can manage with special care the many patients who seem physiologically to be more vulnerable than most people to anxiety. Of them, Andresen[2] says:

> Some people seem to have been born with autonomic nervous systems that are more reactive than average. . . . Thus some people, when subjected to relatively little pressure, react violently, while others, under relatively severe tension, react very little.

Why Practicing Physicians Should Treat Psychiatric Illness

The practicing physician is the best person to treat most patients with psychiatric illness. For one thing, psychiatric illness is in many basic ways not unlike physical illness. For instance, with a little help from the doctor, many a patient recovers spontaneously. As Tyler[24] points out:

> Physicians recognize that when disease threatens the human body, certain antibody defenses and other bodily functions are called into play. . . . Many physicians do not realize, however, that much the same thing occurs in regard to emotional illnesses. . . . (A)ll mental and emotional illnesses tend to undergo remission spontaneously as a result of psychologic defenses that are set up within the organism in an attempt to cure itself. . . .

For another thing, the practicing physician more often than not is the first medical person to see a patient with psychiatric illness. He is therefore in an excellent position for case-finding. He may discover psychiatric illness because the patient has come explicitly for help with emotional problems, or he may detect concurrent but unsuspected psychiatric illness while he is treating a patient's somatic illness. Both American and European doctors report that at least half of their patients have emotional problems.[8]

Then, too, his value treating psychiatric disorders stems from the respect and confidence which patient and family accord him, and from his long-accumulated knowledge of them. It is enhanced by today's emphasis on treating psychiatric patients near their homes. President Annis[3] of the American Medical Association says:

> . . . the new emphasis in mental health is towards community centered treatment. . . . Comprehensive community programs and facilities are the keystone of the AMA's mental health program. . . . However, as this movement back to the community grows and develops, it will place an extra burden of responsibility on community members and leaders. Your national AMA and your state association will do all they can to help local efforts—but the real progress in combatting mental illness is going to come at the grass roots.

Not unimportantly, the practicing physician is valuable in psychiatric therapy because *he is there.* He is where the patient is. This is not so often true of the psychiatrist. Although most larger cities have numbers of psychiatrists, many rural and semi-rural areas of the country have no psychiatrist at all; people living in those areas can reach a psychiatrist only with difficulty.

As contrasted with persons who sometimes treat emotional illness, but are not physicians, the physician can understand and treat somatic disorders which so often co-exist with psychiatric illness, aggravate it, or even cause it. He also has legal authority to prescribe the new psychotropic drugs. When somatic illness intervenes during psychiatric therapy, he can detect it and see that it is properly treated. In this connection, Pollock[20] gives the example of a 45-year-old woman being treated for paranoid schizophrenia who complained to her psychotherapist that she had a ruptured appendix. Despite the psychiatrist's suspicion that her symptoms might come only from psychiatric illness, he sent her to a surgeon who found

an abdominal mass which on subsequent operation proved to be an abscess complicating ruptured appendix.

The practicing physician is invaluable in the psychiatric management of patients who need psychiatric care but who refuse to admit psychiatric illness and therefore refuse to see a psychiatrist. An informed practicing physician can at least carry such patients until they improve and no longer need further psychiatric care, or until he can bring them to see the necessity for psychiatric consultation.

Psychiatric Skills Used by the Practicing Physician

The practicing physician need not become a junior-grade psychiatrist to use some basic psychiatric therapies skillfully and effectively. Among the therapies the practicing physician may use with profit, Tyler[24] includes: ventilation, reassurance, clarification, environmental manipulation, gratification of inner needs by such pursuits as hobbies, advice, inspiration, and encouragement. These techniques relieve anxiety, lighten depression, and help patients cope with difficult situations.

Specific Physician Approaches to Specific Conditions

Having seen in general some of the ways that the practicing physician can treat psychiatric illness, let us now examine some specific approaches by which the physician with minimal psychiatric understanding and skill can treat some specific psychiatric conditions.

Before we start, however, let us emphasize the point that effective psychiatric therapy requires the physician to become emotionally involved with his patients. Without such involvement, psychiatric therapy remains a pretty sterile and unsatisfactory thing. Yet the physician often carefully avoids involvement. According to Fischer:

> The first method by which the physician avoids being involved with his patient on an emotional . . . level is via . . . rationalizations. One of the most common of these is the physician saying he does not have time. . . .
>
> Another method . . . is to rush through an organic examination . . . and tell [the patient] there is nothing wrong. . . .
>
> Another example . . . is the physician who privately labels his patient . . . a "psycho" . . . so that disposes of the matter. . . .
>
> Another way . . . is the . . . mechanical approach to medicine. Not only does [he] arrange an office so that it would be impossible to talk with . . . privacy, but it has so many instruments, gadgets, scopes, and mechanical gadgets around that the message is quite clear that only technical and mechanical measurements will be acceptable.

On the other hand, the practicing physician is quite used to taking a medical history. Often he need modify his history-taking procedure very little to adapt it to psychotherapeutic uses. As Lieberman[17] says:

> Communicated history is often a synthesis of inaccurately and incompletely observed events presented with bias and thoughtful rationalization. In medicine, history taking and evaluation has always been considered the very acme of the art. The old-time general practitioner was the trusted confidant of the family and a pillar of the community not because of the digitalis and opiates he carried in his black bag but because he had the patience to become the father confessor of his charges.

Another aspect of good psychiatric therapy which most physicians can provide with little difficulty is accepting necessary dependence of the patient upon them. All patients—psychiatric or otherwise—feel more or less anxious and helpless, and therefore need to be somewhat dependent. A doctor's ultimate therapeutic goal may be to make his patient confident and independent, but he may have to start by letting the patient be dependent upon him, and later induce him gradually to take over for himself.[19]

Management of Emotional Aspects of Somatic Illness

When a basically healthy patient is disturbed by such situations as severe, crippling, painful, or even life-threatening illness, the practicing physician can be especially useful. For one important thing, he can, of course, relieve the patient's physical pain and discomfort, and thereby increase his optimism and diminish his anxiety. As the doctor ministers to physical

illness, his manner and expressed attitudes will—for better or for worse—affect his patient's emotional state. If his manner and attitudes are good, and, further if he gives the patient an opportunity to express his fears and irritations because of his somatic illness, and provides other psychotherapies, he can do more than any other person to minimize the disturbing effect of somatic illness.

As an example, one might cite the observation of Lewin[16] that patients with chronic prostatitis often have depressive reaction from fear of loss of sexual potency. He advises the doctor therefore to be alert to this possibility of depression, and when it occurs, to treat it by means both of anti-depressive drugs and of interpersonal therapies.

Coping with the depression which plagues most dying patients is an important responsibility which is best assumed by the primary physician, but in doing so, the physician may himself experience uncomfortable personal feelings. LeShan and LeShan[15] therefore remind us that:

> The psychotherapist . . . cannot protect himself by the defensive maneuver that necessity sometimes dictates to the purely medical specialist whose patients often die—the surgeon, for example. . . . This defense—the brusque, armoured manner, the uninvolved relationship, the viewing of the patient's disease as of primary interest and the concentration on its technical details to the exclusion of as much else of the person as possible—may save the physician a great deal of heartache, but is a defense which is impossible to assume for one who is in a psychotherapeutic role.

Because the fact that a patient is dying has such impact upon the physician, and upon nurses and other care-taking personnel, the physician must combat both his own and the staff's tendency to isolate and abandon the patient whose situation is officially hopeless. After all, it is precisely when he is dying that the patient needs concerned optimism in those about him. To complicate things, the depressed, dying patient may not call attention to his depression; indeed, superficially he may seem cheerful. He may have a so-called smiling depression. But the staff which, alert to the possibility of depression, looks at him closely will usually detect his depression. The physician should then, of course, treat the patient with drugs and supportive psychotherapy. And he should instruct the ward staff as to their relations with the patient. He should help the family cope with their own emotional reactions to the patient's condition and advise them as to how they can best help him.

Physician Deals with Intrafamilial Problems

Even when no family member is facing death, the family may need the doctor's help. For example, he can serve as marriage counselor. Married couples have always looked to their physician for help with marital problems. By such counselling, he can prevent or correct psychiatric disturbance of each of the quarreling couple and thereby also help prevent or correct disturbance arising in their dependent children and other close relatives. As a marriage counselor, Klemer[12] suggests that the doctor (paraphrased):

1) Establish rapport if it is not already there,
2) Let the patient ventilate his hostility toward his mate,
3) Provide the reassurance of accepting the patient's attitude,
4) Diagnose the problems with the patient,
5) Encourage the patient's education,
6) Help the patient select one of possible alternative actions, and
7) Motivate the patient to take the chosen action to improve the marriage relationship.

The practicing physician can also help the over-concerned mother and her child. If he minimizes her errors and accentuates her assets as she cares for her children, she becomes more self-sufficient and therefore has less reason to badger him about minor matters.[9] However, if a doctor sees evidence, say during post partum visits, that a mother is harmfully rejecting her child, he can help her improve maternal attitudes.

A family may have to face the problem of an aging parent. This problem has no pat solution. To solve it, one must take into account not only the needs of the oldster himself and the financial and other

abilities of the family to meet those needs, but also the attitudes and problems of each other family member. Whereas placing Dad in a nearby rest home solves the problem very well for one family, it splits another family asunder. Only by inducing the family members to analyze the problem carefully and to discover their real feelings can the physician help them to find the best possible solution to their particular problem, and to accept that solution the most happily.

Management of Psychosomatic Conditions

The primary physician can deal simultaneously with the somatic and the emotional aspects of psychosomatic conditions such as colitis, headaches, and dermatitis. After studying the effect of a general practitioner's treatment of 26 patients with neurodermatitis, for example, Schoenberg and Carr[21] report:

> Neurodermatitis patients were treated in brief psychotherapy . . . designed to encourage . . . the expression of hostility toward contemporary life conflicts. . . . Patients with neurodermatitis can be treated in brief psychotherapy with successful remission of their symptoms. . . .

Emotional disorders affect the courses of other medical disorders. The physician can therefore usefully concern himself with emotional problems which complicate the symptoms, signs, course, and management of primary somatic illnesses. Physicians have long noted that emotionally important events modify illness remarkably. The asthmatic patient, if disappointed, may have a severe attack of dyspnea. A heretofore well regulated diabetic patient who becomes anxious may develop insulin reaction or acidotic coma. An epileptic patient, under emotional stress, may have more frequent seizures. If these illnesses and the patient's emotions thus influence one another, it is logical to treat somatic and psychic aspects simultaneously. And the logical person to give this simultaneous therapy is the practicing physician.

Management of Psychiatric Illness

The practicing physician who undertakes the care of patients with chronic psychotic illness makes an especially valuable contribution. Most psychiatrists believe that most patients with, for example, chronic schizophrenia are treated optimally in the community rather than in mental hospitals, even though occasional acute exacerbations may necessitate brief periods of hospitalization locally. If these patients are seen regularly in the community by a physician who offers them drugs and brief psychotherapy, and helps to solve everyday adjustment problems, they often not only remain out of the hospital, they make useful socio-economic contributions.

The practicing physician is the logical person to whom the patient with manic-depressive psychosis turns during acute manic or depressed episodes. By helping the patient find his way to electroconvulsive or other specific psychiatric therapy early in such episode, the physician may not only help the patient get relief quickly, but prevent suicide.

Women of menopausal age, and men at the climacterium may develop involutional psychotic conditions which the alert physician can detect early and either treat himself or have treated by a consultant.

Chronic neuroses, which either are not amenable to a psychiatrist's therapies, or which the patient for a variety of reasons does not take to the psychiatrist, often may be managed very well by the practicing physician. He does not aim to cure the patient, perhaps, but he does try to make the patient more comfortable and better able to use such resources as he has to achieve the best adjustment to his particular way of life. Ministrations of the physician can well make the difference between a totally dependent person and one who at least can earn a marginal living and contribute something of himself to his family.

Many psychiatrists encourage the physician to treat the chronic alcoholic patient. Although alcoholics require great patience on the part of the treating phy-

sician, many of them are currently doing well under the care of a family physician. Bell[6] suggests that the physician giving psychotherapy to an alcoholic patient start by treating the symptom of the drinking, and leave the treatment of the underlying neurosis until later—if, indeed, he ever treats the neurosis at all. An important therapeutic goal is to get the patient to abandon his hope that after therapy he will be able to drink "like other people." He must accept the fact that he shall never again be able to drink normally. If he does accept that fact, therapy can continue. Later therapy is directed at the basically infantile nature of the alcoholic patient; the physician helps the patient develop mature ways of behaving socially and of getting gratification.

Management of Acute Psychiatric Conditions

The practicing physician can manage a substantially large percentage of the acute psychotic exacerbations that develop among his patients. However alarming may be the confused, hallucinating, grotesquely threatening, or even assaultive psychotic patient, it is very likely that a vigorous course of psychiatric therapy will quickly produce improvement. Although the physician may well use psychiatric consultation, and even turn over the care of many such acute episodes to a psychiatrist, the informed physician can manage many of them himself. Thereby, the patient avoids prolonged hospitalization in a state hospital, and he suffers only minimal disruption of his life and of his relations with his family.

New antidepressive drugs and improved techniques of supportive psychotherapy enable the physician to manage a significant percentage of his patients with acute depression. Electroconvulsive therapy administered by the psychiatrist remains an excellent method of treatment for patients with some kinds of depression, but the monoamine oxidase inhibitors and drugs like Tofranil (imipramine) and Elavil (amitriptyline) given by the practicing physician will adequately control most cases of depression. The MAO inhibitors are usually recommended for the treatment of depressive reactions to situational problems, and the imipramine and amitriptyline type drugs for endogenous depressions.

Acute anxiety states are often best treated by the family physician—especially when the anxiety is mild and related closely to situational problems.[7] Offering counseling and guidance, the physician helps the patient see how his thoughts trigger his anxiety attacks. He points out how many of the physiologic symptoms such as palpitation, hyperventilation, and dry mouth—which may themselves aggravate the patient's anxiety—are just the natural autonomic expression of the anxiety. By giving meprobamate or Librium (chlordiazepoxide)[5] he can reduce the patient's anxiety and thereby both facilitate psychotherapy and let the patient recover from fatigue. If the anxiety is very severe, or if it persists, the doctor may refer the patient to a psychiatrist for special therapies which could include electroconvulsive therapy. Even so, the primary physician remains in the picture and resumes the treatment after the psychiatrist has completed his ministrations.

Suicide Threats and Other Emergencies

The practicing physician will from time to time, during the natural course of his medical activities, encounter psychiatric emergencies. Perhaps the most urgent of these—or at least that urgent emergency which he will most frequently see—is the potentially suicidal patient, for suicide is the fifth highest cause of death in this country. A suicide threat becomes known to the doctor in a variety of ways: relatives may report a patient's suicide threat; the patient may make an attempt at suicide; the patient may even telephone the physician to report his intent; or the physician may discover while seeing a patient about other things that suicide is a real possibility.

Spiegel and Neuringer[23] believe that the nature of suicide is such as to permit the

physician to dissuade many patients from their proposed action. They say:

> Most individuals find themselves overcome by dread as they approach suicidal action and are unable to carry out their wishes to die. This intense experience of dread . . . serves as a natural brake. . . . In order for suicidal action to become possible, some process must occur in the individual which reduces this experience of dread.

Accordingly, Spiegel and Neuringer suggest, the physician should do what he can to increase this lifesaving feeling of dread, and of course, he should do nothing to diminish the dread. The physician should emphasize to the patient (who may be denying the realities of death and its irrevocability) the realities of what he is contemplating, so that his dread will remain high. Giving phenothiazines, of course, is contraindicated, because they may so tranquilize the patient that he no longer dreads the thought of death. On the other hand, psychic energizers may raise his anxiety level and with it his feeling of dread. They may make him less comfortable, but he is safer from himself.

The Physician in the Psychiatric Setting

To enhance the practicing physician's effectiveness in dealing with psychiatric disorders which he properly treats, he must be permitted to treat patients not only in their homes and in his office, but also in psychiatric clinics and on the psychiatric wards of general hospitals.

As yet, comparatively few nonpsychiatrist physicians function on the staffs of either psychiatric clinics or psychiatric wards. This may be simply because no one has thought of it; other times, however, it is because some psychiatrists believe that only psychiatrists or others specially trained in psychiatric therapy should function in clinics and psychiatric wards. Despite this opinion, physicians who have had appropriate orientation and training, and who have guidance by psychiatrists, do contribute both in clinics and in psychiatric wards. Some psychiatrists believe that psychiatric care of many patients will be better served if the practicing physician treats them on the psychiatric ward—where he enjoys the assistance of special nursing and other personnel, and readily available psychiatric consultation—as well as on the medical and surgical wards where, as noted earlier in this paper, half the patients have significant psychiatric disorder.

Whatever the administrative arrangements under which the practicing physician treats psychiatric disorders among his patients, however, continuing effort should be made by both psychiatrist and other physician to establish and maintain the fullest possible collaboration. As Allen and MacKinnon[1] observe:

> . . . the physician may often find that he may protect his time, effort and interest in the patient by his use of psychiatric consultation, and sometimes concurrent psychiatric treatment. Such means can often help to overcome those factors which are most apt to block the physician's efforts. It is gratifying . . . to see more and more the teamwork approach to physical conditions complicated by emotional factors.

Sometimes this collaboration will mean the psychiatrist and the other physician treating a patient jointly; other times, the practicing physician will treat the patient, but confer regularly with the psychiatrist. Still other times, the practicing physician will treat the patient and call on the psychiatrist only as required.

Need for Postgraduate Education

Now, this paper may have created some misapprehensions by its generally optimistic attitudes concerning the use of psychiatric understanding and skills by physicians who are not psychiatrists. One might perhaps infer from this paper that psychiatric therapy is a simple thing requiring only good will and everyday horsesense. That just is not so. Raw common sense and intuition are no more sufficient for giving psychiatric therapies than they are for flying jet transport planes.

On the other hand, a physician, during a number of years of practice, usually acquires a mass of useful psychiatric knowledge. Unfortunately this knowledge is not fully available to him; he does not know that he has it, it is disorganized,

and he may not have the skill to apply it to a given problem. It can be very useful, though, if he can somehow organize it, couple it with his knowledge of somatic illness and its treatment, and apply it to his patients.

Many faculties who have offered postgraduate courses in psychiatry to practicing physicians have demonstrated that it is indeed possible and even feasible, during postgraduate courses, to utilize this pre-existing knowledge—to organize it, to make it more accessible to the physician, and by filling in relatively small gaps, to enhance its value. Happily, these courses of formal instruction need not take a great deal of class time. Many physicians have been astounded by the improvement of their psychiatric skills after 10 weeks of two hours of class, once a week.

Because this soil is so fertile, more and more medical societies, medical schools, and other medical organizations are designing and offering tailor-made courses for practicing physicians. It is estimated that well over 150 such courses are presently being offered throughout the country, and more courses appear all the time. Such a course, need one say, brings us together here today.

As psychiatric research discovers still more ways whereby the practicing physician can treat the emotional problems of his patients, as more physicians seek to learn those ways, and as more courses are offered to help the physician expand his knowledge, psychiatric care offered in this country will improve. Fewer patients will have to suffer the pains of psychiatric illness for want of a physician to relieve them.

References

1. Allen, A. and H. MacKinnon: The physician's use of psychiatric consultation in general hospital practice, Ohio Med. J., 51:1202 (Dec.) 1955.

2. Andresen, A. F. R., Jr.: A practical approach to anxiety reactions, New York J. Med., 63:1144 (15 Apr.) 1963.

3. Annis, E. R.: Changes coming in nation's mental health profile, J. Indiana Med. Assn., 56:160 (Apr.) 1963.

4. Arieff, A. J.: Epilepsy: some psychiatric aspects including disability and rehabilitation, Med. Times, 91: 439 (May) 1963.

5. Bader, A.: Über angstlösende Medikation in der Allgemeinpraxis, Praxis, 52:91 (24 Jan.) 1963.

6. Bell, E. F. Jr.: Alcoholism: the doctor's dilemma, J. Mississippi Med. Assn., 4:200 (May) 1963.

7. Bennett, A. E.: Anxiety as a symptom of mental illness, GP, 27:101 (May) 1963.

8. Bleuler, M.: Entwicklungslinien psychiatrischer Praxis und Forschung in jüngster Zeit, Schweiz. Med. Wschr., 91:1549, 1961.

9. Coddington, R. D.: The difficult mother, Penn. Med. J., 66:25 (May) 1963.

10. Crohn, B. B.: Psychosomatic factors in ulcerative colitis in children, New York J. Med., 63:1456 (15 May) 1963.

11. Fischer, H. K.: Psychological mechanisms of the doctor, Trans. Penn. Acad. Ophthal., 16:38 (Spring) 1963.

12. Klemer, R. H.: Marriage counselling in medical practice. 1. Treatment or referral, Western J. Surg., 71: 96 (Mar.-Apr.) 1963.

13. Landgraf, C. W., Jr.: Post partum psychosis, Nebraska Med. J., 48:209 (May) 1963.

14. Larson, J. W., et al.: Psychogenic urinary retention in women, J.A.M.A., 184:697 (1 June) 1963.

15. LeShan, L. and LeShan, E.: Psychotherapy and the patient with a limited life span, Psychiatry, 24:318, 1961.

16. Lewin, K. K.: Emotional aspects of prostatitis, Geriatrics, 18:261 (Apr.) 1963.

17. Lieberman, A.: A case of wasted veracity, J. Indiana Med. Assn., 56:563 (May) 1963.

18. Maholick, L. T. and Shapiro, D. S.: Rx: talk, Med. Times, 91:449 (May) 1963.

19. McQuade, A. and Goldfarb, A. I.: Coping with feelings of helplessness, Amer. J. Nursing, 63:77 (May) 1963.

20. Pollock, J. H.: Psychiatrists: even hypochondriacs may require surgery, Western Med., 4:132 (Apr.) 1963.

21. Schoenberg, B. and Carr, A. C.: An investigation of criteria for brief psychotherapy of neurodermatitis, Psychosom. Med., 25:253 (May-June) 1963.

22. Slavson, S. R.: Steps in sensitizing parents (couples) in groups toward schizophrenic children, Int. J. Group Psychother., 13:176 (Apr.) 1963.

23. Spiegel, D. E. and Neuringer, C.: Role of dread in suicidal behavior, J. Abnorm. Soc. Psychol., 66:507 (May) 1963.

24. Tyler, J. E.: Common sense psychiatry for the family physician, Southern Med. J., 56:496 (May) 1963.

25. Whitehouse, F. A.: Cardiovascular disease and mental health, Rehab. Lit., 24:130 (May) 1963.

26. Zeublin, W.: Zur Behandlung schwerer kindlicher Kontaktstoerungen mit Medikamenten, Schweiz. Med. Wschr., 93:84 (12 June) 1963.

Principles of Brief Psychotherapy*

• The author gives the basis and procedure for brief psychotherapy using the psychoanalytic method. The course of events in the sequence of emotional stresses is outlined.

ARTHUR P. BURDON, M. D.†
New Orleans

THE effect of dynamic theories of personality, especially psychoanalysis, in transforming modern American psychiatry has been enormous within the last several decades. Now the older descriptive psychiatry is augmented by a comprehensive theory of emotional illness as maladaption to conflict between incompatible unconscious wishes within the patient's psyche.[1] With this shift from alienist to analyst, the average practicing psychiatrist has become a purposive and self-aware psychotherapist, no longer content with intuitive or "rule of thumb" approaches. Psychoanalysis has contributed brilliantly to psychotherapeutic technique for that small group of patients suitable for psychoanalysis. It has used free association to effect an understanding of the evolving transferences and resistances; yet these very techniques must undergo major changes and shifts in emphasis to reasonably approach giving effective psychotherapy to the majority of office patients. This need has given rise to many efforts to adapt psychoanalytic technique to shorter and broader-based psychotherapy.[2-5] Further, there have been concerted efforts to understand the commonalities of all successful psychotherapy as practiced by physicians of whatever theoretical bent.[6] This paper is a discussion of some principles of brief psychotherapy which I have found useful in achieving symptom relief for most patients, and in striving toward attitude change in certain patients.

* Paper presented in part at the Annual Meeting of The Louisiana Psychiatric Association (Jan. 19, 1963).

† Clinical Associate Professor of Psychiatry, L.S.U. Medical School.

The Plan in Brief Psychotherapy

Brief psychotherapy is here arbitrarily designated as from ten to twenty hours of psychotherapy, with treatment sessions occurring once or twice a week. This is to make a distinction between emergency management of specific emotional problems or the prescription of medical or physical treatments only, on the one hand, and to distinguish it from the long term psychotherapeutic efforts which involve a full development and exploration of the patient's deep unconscious yearnings focused in the treatment situation. Intense transference reactions do occur in brief psychotherapy and are welcomed but are handled differently than in psychoanalysis. This is done by specifically interpreting the transference feelings as they arrive and relating them to reality events so as to prevent their unwieldy development in the course of treatment. Though moderate doses of tranquilizing and mood elevating drugs may be given in the course of brief psychotherapy, their use is limited to facilitate the patient's work on psychological change and interchange with the psychiatrist, and not as a substitute for self expression and self exploration.

Basic to the whole process of brief psychotherapy is the active mobilization and evocation of the healthy aspects of the patient's personality while negating, reversing, or neutralizing the pathological trends in the patient's feelings, attitudes, and actions.[7] It is most important here to emphasize that the patient needs to achieve a degree of success in the mastery of inner psychological conflict which he has not previously achieved, and from which his symptoms derive. This means

a change in the psychic equilibrium of the patient gained with or without his conscious insight. While the deepest possible psychodynamic understanding of the patient on the part of the psychiatrist is essential—especially of the ego's impasse in coping—the dynamics of cure are not the dynamics of illness; the patient does not benefit by a personally conducted case conference on his psychopathology. In practical experience, I am convinced that the judicious withholding of certain well understood information about the patient's personality, while actively assisting the patient's efforts to struggle successfully with his problem, is of more benefit to the patient than any relentless pursuit of theoretical "insight".

Principles of Brief Psychotherapy

The principles of brief psychotherapy are here discussed in the remainder of the paper under five principal headings: The basic trust of the patient in the psychiatrist, the wishes of the patient for a helpful change, the willingness of the patient to experience emotional exposure with the psychiatrist, the patient's potential for mastery of the resultant emotional upheaval, and finally the patient's ability to achieve a new perspective about his previously unmastered conflictual situation. These principles are listed in order of their usual appearance in psychotherapy from the first to the last, and also in order of their importance to the success of the treatment effort. Crudely speaking, basic trust is the bottom layer of a pyramid, the weightiest and most essential foundation, whereas the specific personal insight is the pinnacle of the structure, giving it its uniqueness and its most striking appearance to others. These five principles do not speak of specific conflicts advisedly, but rather of ego states, that is of various aspects of the patient's conscious attempts at mastery of himself and of his environment and of his present relationship with the psychiatrist in the office. The emphasis is on the mobilization of these healthy ego states.

1. Basic Trust

Essential as it is to all doctor-patient relationships, a trusting faith in the medical integrity and mature judgments of the psychiatrist cannot be taken for granted lest the entire treatment be in peril. The patient's expectancy from the psychiatrist and from psychotherapy is often gravely muddled and must be the first order of business in the contact between patient and psychiatrist. It is necessary to clinically assess the patient's healthy skepticism and negative feelings as well as his normal anxiety, shame or timidity at the start of treatment. The patient's potential for a healthy, trusting relationship, based as it is on a sublimated mother-child relationship, must be distinguished from a blind infantile regressive yearning for magical relief, and his motives confronted in this regard. But what is of more importance is the degree of power the patient is willing to import to his relationship with the psychiatrist and whether he expects this power to be in the direction of helpfulness. The initial contact with its lasting impression is as dependent on the psychiatrist's real interest in the total human being as it is on the patient's need for having a person to trust. In many ways the patient's personal prognosis of his relationship with the psychiatrist, conscious and unconscious, is going to be fulfilled, and whether the psychotherapy is brief or prolonged or successful or unsuccessful is determined by the patient's expectancy fully as much as it is determined by the enmeshing of the patient's feelings with the expectancies of the physician. In this regard, blind omnipotent optimism on the part of the psychiatrist is equally to be abjured as it is on the part of the patient.

2. Wish for Helpful Change

To evoke and mobilize the patient's commitment to helpful change within himself and his environment in the present-day situation always meets some resistance. By common usage, this particular attitude of the patient has often been referred to as "motivation for treatment". Yet further exploration is needed. What does he

mean to change? And when and whom and how? In common experience, the patient comes with a partial inability to effect a helpful change and with some retreat from that change into unhealthy patterns of adaptation, and he needs encouragement and specific direction toward the need to change his life for the better in regard to his symptoms. The most important characteristic to assess is whether the patient's wish for change involves a change of his own inner personality and whether this is confirmed by the thoughts and attitudes which he brings to the subsequent psychotherapy interviews. Then, does the change the patient wishes for seem realistic and within his capabilities? Will he give the psychiatrist some control over him for a period of time in treatment to help him make the change which the doctor and patient agree is desirable? Here it is very important to notice the crucial influence of other persons on the patient's life and to assess whether the spouse or family are going to function as helpful, "auxiliary therapists" or in an anti-therapeutic way.

3. Emotional Exposure

Most patients have considerably more ability to face their feelings than they display in usual life, and there is a great need for the patients to have permission and encouragement to express in words their innermost feelings. Yet, when given the opportunity, patients balk and find themselves unable to express the depth of preconscious thought connected with powerful affect which would be most helpful for them. A healthy abreaction to the physician of emotional problems will be allowed if the patient can see it as a medical concern rather than an invasion of his personal privacy. One can expect stiff resistance in this area, especially in unresolved grief reactions of considerable duration, but if sufficient trust in the physician and in the medical purposes of the reliving of painful emotions can be secured, the task can be done. Emotional catharsis must be linked in the patient's mind with both the present discomfort and the past traumatic events before new solutions can be sought by the patient. The psychiatrist must not misunderstand emotional indulgence and "hysterical storms" for *remedial* cathartic abreaction, a process which only occurs with difficulty.

4. Potential for Conflict Mastery

As psychotherapy is very powerful to change a person in helpful ways, so it can be equally powerful to shock and hurt a patient, to overstretch his ego defenses, to lead him to a regressive acting out, and to drive him to more difficult and pathological ways to defend himself against the emergence of unresolved feelings within himself. In this regard, it is mandatory to assess the patient's ability to handle the new crisis now confronting him in psychotherapy, the dealing again with the revived conflicts in all their intensity during the treatment session. Therefore, it is most important to understand from a careful history what the patient's own adaptive abilities have been in the past. What healthy identifications has he had in the past with strong persons who have been able to solve problems such as he now presents himself with? What strengths has he had in the past, and what has been his healthiest and most mature approach to his life's problems? A common mistake in taking a psychiatric history is to stress the psychopathological aspects while neglecting the history of the patient's healthy activities and healthy resources. The task in this phase of psychotherapy is the revivification of the patient's healthy identifications with persons present and past and the amalgamation of these identifications with an identification with the psychiatrist's hopeful and realistic view of the "here and now" situation for the patient while both mutually seek for their maximum potential. At this phase of the treatment the psychiatrist can and often does give helpful alternate suggestions, not to be mistaken for directions or advice, but rather as ideas which the patient can think over and test before deciding his own course of action.

5. A New Perspective (Insight)

In all patients there is a healthy urge for realistic mastery and yet also a struggle to ward off and avoid facing certain issues about themselves; what they are really like in relation to other people. For the most meaningful and lasting shift in the patient's personal attitudes, the patient should gain an insightful awareness of hitherto neglected, unrealistic attitudes and ideas which have a direct bearing at the point or urgency in the present real situation. That it has roots in the past personal relationships and traumatic events can be explored to the extent only that confirms the existence of the conflict and to which the affective power of the conflict is attached. To be specific, there is no value in a generalized or genetic insight, however valid, nor of an insight related to things about the patient's basic character structure which are irrelevant to the immediate point of the patient's present symptom complex. Rather, a deliberately measured, carefully and judiciously given insight should result in both an intellectual awareness and an emotional relief with a clearing of the patient's understanding about himself and the gaining of a healthy and new perspective. To confirm the existence and the validity of this new perspective, there should be working through of this insight in the patient's daily life by some kind of action, a point often overlooked when considering only long term psychotherapy where action there is so much slower. In brief psychotherapy, an insight should lead to real and new action: the patient spends a sleepless and restless night and finally makes a decision about something that has been troubling him for weeks or years; he finally faces a situation and resolves the impasse; he takes the plunge in one way or another. Then in subsequent psychotherapy interviews these actions are reviewed and the feelings about them are dealt with until such time as a mutually arrived upon termination is effected.

Discussion

There is no claim made that this brief psychotherapy can be all-encompassing or completely change personality structure and attitudes of the patients under such treatment; such change is not always healthful nor is it always necessary to effect it under treatment. In fact, I believe that many patients go on to further real maturation of personality on the basis of a helpful push toward problem-solving in brief psychotherapy; from this they carry a helping identification with the psychiatrist and a reenforcement of their own attitudes of belief in their basic worth. They also acquire a tolerance for some of their previously unacceptable strivings and feelings, and an interest in understanding the way they feel toward other people as a method of relief of emotional problems. Such a flexible patient, through identification and subsequent sublimation of drives, can achieve much progress without further treatment. Also, a psychotheapeutic experience which did not tamper unnecessarily with defenses nor shock the patient by any unwise attempts at insight can do nothing but encourage the patient to return for further help as needed.

Indications and Contraindications

It is impossible to list all the specific indications and contraindications for brief psychotherapy; one can only give some broad outlines as to the rationale for approach to the patient. I am convinced that almost all patients can profit from brief psychotherapy along the lines I have indicated, some of whom will need no further therapy while others will move on to definitive psychoanalysis, to long term intensive analytic psychotherapy, or to various forms of physical or medical management. Yet, a therapeutic trial at brief psychotherapy seems to me to be indicated in most cases, and indeed to be the practical fact in everyday office practice with the majority of our cases.

It will be noted again that these principles have to do with ego functions and not with categories of diagnosis. Brief ther-

apy seems to be a treatment most successful with the acutely situationally disturbed patients, ones whose premorbid personalities had stability and purpose even though this equilibrium may have been based on quite formidable defenses and compromises. In this regard, I have noticed that some acute schizophrenic reactions have an excellent prognosis for reversal, especially if there is a history of a well-organized obsessional structure which was socially rewarding in the past. Further, acute neurotic reactions, accompanied by manifest anxiety in otherwise rather successful personalities have a good prognosis.

Those patients who respond poorly to brief psychotherapy seem to do so because of failure in ego reintegration within the time of therapy. One such type is the patient who seems bent on a massive psychotic regression whether to withdrawal, depression, or elation. Another type is the chronic pregenital character disorder, including chronic masochistic or depressive characters, who misuse all human relations to continue their illness. A different category of patients who respond inadequately to brief psychotherapy may respond quite well to psychoanalysis: those whose neurosis is one great mass of defenses, yet whose character structure is based primarily on normal oedipal strivings. Typically, the highly obsessional personality without recent traumatic breakdown and the floridly hysterical patient who distorts the treatment relationship quickly into a transference neurosis must be treated by psychoanalysis, each defense requiring a prolonged and detailed unravelling before it yields to a realistic appreciation of the doctor-patient relationship and of an ego-reintegration on the basis of personal insight.

References

1. Adatto, Carl P.: The Impact of Dynamic Psychiatry in Louisiana, The Journal of the La. St. Medical Society, Vol. 113, No. 5, 204, May 1961.

2. Alexander, F. and French, T. M.: Psychoanalytic Therapy, The Ronald Press Co., New York, 1946.

3. Bibring, Edward: Psychoanalysis and the Dynamic Psychotherapies, American Psychoanalytic Assn. Journal, 2:745, 1954.

4. Deutsch, Felix: Applied Psychoanalysis: Selected Objectives of Psychotherapy, Grune & Stratton, Inc., New York, N. Y., 1959.

5. Wolberg, Lewis R.: The Techniques of Psychotherapy, Grune & Stratton, Inc., New York, N. Y., 1954.

6. Frank, Jerome: Persuasion and Healing, The Johns Hopkins Press, Baltimore, Md., 1961.

7. Bandler, Bernard: Health Oriented Psychotherapy, Psychosomatic Medicine, Vol. 21, No. 3, 177, 1959.

Drugs—The Most Regulated Industry

In the United States we now have hundreds of drug laws, federal and state. Justification for their existence should depend alone on their providing adequate governmental assistance to assure safe, pure and effective drugs. Their design should be protection of the public health and not promotion of other objectives. Enforcing and administering these laws are some 190 different state agencies and several federal ones. Many states and the Federal Government have three or more agencies regulating various aspects of the drug industry. Indeed some states have agencies sharing concurrent, overlapping and even conflicting jurisdiction over drug law enforcement. By any measurement, by any criterion, the drug industry in terms of its products is the most highly regulated industry in this country.—John T. Kelly, Legislative Counsel, Pharmaceutical Manufacturers Association, to National Drug Trade Conference, Jan. 22, 1963.

A Psychopath Who Killed

• This paper discusses the case history of the psychopath and his relation to society. The characteristics of the sociopath are outlined.

JOHN C. TRICE, M. D.*
Pineville
JOEL R. BUTLER, Ph.D.†
Baton Rouge

Statement of the Problem

PSYCHOPATHY provides society with an abundance of abnormal variants of behavior, both minor and major in terms of the scope of the disturbance. The prognosis is always poor and there is limited knowledge of the extent of anguish, grief, suffering, and outright destruction wrought by the psychopaths. They account for most of such criminal activities as forgery, embezzlement, swindles, robbery, and infrequently—murder.

Psychopathy is present in a large but undetermined proportion of the population as is the psychosis, but much has been done to rescue the psychotic from his illness, while letting the psychopath go untreated and to a certain extent, uncontrolled.

It is not as though we have been suddenly confronted with the illness. Psychopathy has been known to man for at least one hundred fifty years. Estmuller, in Germany during the latter part of the eighteenth century, was the first to make a systematic observation of the psychopathic behavioral phenomenon and classified it as *melancholie sans delire.* Pinel in a latter observation called the disorder mania without delusions. In the nineteenth century, Pritchard of Bristol gave wide popularity to the term moral insanity to represent the psychopath. Moral insanity was defined as "a madness consisting in a morbid perversion of the natural feelings, affections, inclinations, temper, habits, moral dispositions, and natural impulses without any remarkable disorder or defect of the intellectual or knowing and reasoning facilities, and particularly without any insane hallucinations or delusions." This is still a fairly accurate description of the psychopathic personality, and the fact that we have little more than descriptive concepts to offer today points to our lack of advancement in this area which is vital to the protection of society.

Explanation of Psychopathic Behavior is Obscure

For a time we ascribed these behavioral tendencies to "constitutional factors" which did not explain anything because we had no idea what such factors might be or how they influenced behavior. Such thinking represents, at best, a "hypothetical construct" *without* physiological location and reflects a poverty of explanatory, verifiable constructs. However, this conception of the problem seems only a natural outgrowth of the somatogenic theories which dominated psychiatry during the nineteenth century. While somatic hypotheses are by no means ruled out as factors in the disorder, it has never been demonstrated that the psychopath is constitutionally inferior. The advance of the psychogenic theory and the dissatisfaction with the vagueness of classification of the "constitutional psychopath" resulted in a sharpening of description and classification. The term psychopath and its various derivatives, such as "psychopathic constitutional personality" or "psycho-

* Dr. Trice is presently Staff Psychiatrist, Central State Hospital, Pineville, Louisiana.
† Assistant Professor, Department of Psychology, Louisiana State University.

pathic inferior," have been replaced under the general heading of personality disorders, usually as Sociopathic Personality Disturbance, and more specifically, as anti-social reaction, dyssocial reaction, sexual deviation, and/or addiction. Thus, the definition of the disorder shows clearly the delineation of the behavior. The concept of the personality disturbance is much more narrow than that of crime or even delinquency, and shows much less purpose than either. Such a diagnosis outlines a specific entity or syndrome of the disorder which has a characteristic behavioral pattern common to all within the classification despite numerous overt differences.

While description of behavior is fairly complete, the concepts which explain such behavior are not so adequate. There is much evidence to support both the psychogenic and somatogenic hypotheses, and certainly they need not be antagonistic. There is evidence that the emotional blunting and lack of affectional relationships can be produced by severe privation and lack of adult models in childhood by which standards of conduct and feelings can be internalized. There is also evidence of abnormal brain activity, for example, electroencephalographic readings show that a significant proportion of psychopaths produce abnormal brain wave patterns, particularly those which act out in an agressive and often violent manner. However, neither hypothesis presents evidence which is sufficient to explain the observed behavior.

Case Involvement

Not atypical of such behavior was the recent case of the State of Louisiana vs. Wayne Turner — charged with murder. The jury, after 26 minutes of deliberation, returned a verdict carrying the mandatory death sentence. The defense, aware that the defendant suffered a rather classical Sociopathic Personality Disturbance, had attempted to prove legal insanity. The Louisiana Law, in regard to legal insanity at the time of the alleged commission of the crime, stems from the famous McNaughton case in England in 1843. The Louisiana Law is:

> Insanity—If the circumstances indicate that because of a mental disease or mental defect the defender was incapable of distinguishing between right and wrong with reference to the conduct in question, the offender shall be exempt from criminal responsibility.

Insanity is a Legal Term

Insanity must be shown by a preponderance of evidence if used as the defense. Insanity, of course, is a legal term and its definition varies within the law depending on the problem at hand such as the making of a will, ability to stand trial proceedings, etc. In each such problem, insanity depends upon the inability to meet certain mental criteria which differ for each legal procedure. As an example, in general the paranoiac who medically is severely psychotic would meet all the criteria for sanity regardless of the legal problem at hand and would, therefore, be treated by the law as a normal individual. Mr. Turner, a sociopath, met the criteria for sanity at the time of the alleged commission of the crime and, therefore, was treated by the law as though he were a normal individual.

The act of murder in itself, by definition, must be considered abnormal, but regardless of the abnormality of the act or of Mr. Turner's disorder, society must be protected from such acts by such individuals. A guarantee of such protection is basic to law to which all persons must abide—within their capacity to do so.

Sociopath Lacks Capacity to Conform

Mr. Turner, behaviorally, does not have the capacity to conform to the basic rules of society, as his history is filled with serious criminal acts. The law does not ask, however, his capacity to conform, but rather his capacity to differentiate right from wrong. The District Attorney argued that Mr. Turner had the intellectual ability to differentiate between right and wrong, and in all probability, that he would not have committed the act had someone been watching. This point was

conceded by the defense and was given in testimony by the psychiatrist and the psycho-criminologist. The District Attorney then further asked the expert witnesses if Mr. Turner had the capacity to act upon this intellectual differentiation between right and wrong. Behaviorally, at least, the sociopath does not demonstrate the ability to profit from such intellectual experience. Thus this question is unanswerable except from the premise of scientific determinism. Certainly, the large majority of the most severely disturbed patients committed to mental hospitals will know that it is wrong to commit a murder.

Sequence of Events in the Crime

One of the District Attorney's arguments in the case was the apparent normal ability of Mr. Turner to plan. If Mr. Turner had the normal ability to plan, he would not have found himself in the predicament he was, prior to commission of the crime. A brief review of his actions preceding the event of murder will more clearly spell out the extent of the serial illogic of his behavior and his lack of understanding of the relationship between antecedent - consequent conditions. Mr. Turner and his pregnant wife were on a lengthy trip, and arrived in a small town in Louisiana without funds and exhausted. Thus, he found himself in somewhat of a desperate situation which, of course, could have been solved in many more logical and acceptable ways than that which his disordered personality concluded. He stole another car and went to a service station to commit an armed robbery. No gloves were worn to conceal his fingerprints on the stolen car, and no mask was worn to hide his identity. At the service station, the attendant attempted to defend himself with his own pistol and was killed in the resultant gun fight. Without taking anything, Mr. Turner immediately fled into the woods and discarded the clip from his 25 caliber pistol, putting the pistol into his coat pocket. By coincidence, he met his wife driving his car. He drove on an out-of-the-way lane, got stuck, ran out of gas, listened to the radio for a short time, and then slept the remainder of the night. When the police found him on a routine investigation of his stalled vehicle, he immediately said, "I am the man you want," and gave a complete and detailed confession voluntarily. On closer inspection of Mr. Turner's behavior in performing the act, we *not only* find abnormalities in his ability to plan, but find almost chaotic disorganization. Rather than escaping in the car he had stolen and driving back to where his wife was to meet him, he ran into the woods and only accidentally came in contact with her later. Rather than discarding the most important piece of evidence, the gun, he discarded the clip from the gun, keeping the gun itself, which was later found in his coat pocket as he was arrested. Rather than filling his tank with gas, which he could have done had he driven away in the stolen car at the service station, and leaving town unobserved, he turned off on an out-of-the-way road, almost out of gas, got stuck, remained in the car until found, routinely, by the police. Upon arrival of the officers, he gave a complete and detailed confession, voluntarily. This, of course, is not the behavior demonstrated by a person who has carefully planned a robbery, and carried his plans to a logical conclusion in keeping with his above average intellectual capacity.

Sociopath Shows Inability to Plan

The inability to plan is a feature noted in sociopathy which many times shows a severe masochistic tendency as in this instance. Mr. Turner's case is psychologically like another in which a young sociopath had a flat tire in a stolen car, and went to the sheriff's office for help.

Mr. Turner's case can be compared to the neurotic with a conversion reaction with paralysis of the lower extremities. The conversion neurotic has the psychological and physical equipment necessary to walk but cannot. In a like manner, Mr. Turner has the psychological and physical equipment to conform, but the equipment in itself is as useless as it is in the con-

version neurotic. Both the conversion neurotic and the sociopath are in need of psychiatric treatment.

Present Treatment

Because the destructive tendencies of such an illness are extreme, both to the individual and to society in general, the disorder has been dealt with by a host of various disciplines, including law, psychiatry, psychology, and sociology. Such groups have tended to work separately and independently with the result of misunderstanding, general confusion and even antagonism, to the extent that control and treatment of the illness are practically at a standstill.

Treatment of sociopaths, in general, requires long-term intensive psychotherapy by highly trained therapists in a strongly controlled environment. The number of such therapists in this country would do well to treat even one per cent of the individuals suffering from this illness. Such individuals cannot be confined to psychiatric hospitals now in existence for psychotics; for reasons that need not be detailed here, psychotics cannot be treated among sociopathic individuals. It is certain that the sociopath should be treated in such a manner that would reshape his basic character. Punishment has proved to be useless in the treatment of such individuals as they profit neither from reward nor punishment under controlled conditions. Neither does the punishment of one sociopath deter other sociopaths from committing criminal acts. It should be noted that at the present time in the state of Louisiana there is no single institution or group of people and not one specialist dealing with this disorder of personality.

Proposed Treatment

While explanatory concepts are far from complete in regard to sociopathy, there is abundant information now available that could be utilized in the control and treatment of the illness, provided there are interest and support given to such a project. Such support must, by necessity, come from a combination of the medical and legal professions in conjunction with the various legislative and administrative bodies as representative of an alert citizenry. This will call for the establishment of an institution solely for the treatment of sociopathy and the sociopathic personality. The institution will have to be governed by the state medical society in cooperation with the bar association and at no time can it be allowed to function as a prison or a prison-like system, for the tremendous weight of history has, time and again, demonstrated that such a system is inadequate in altering the psychopath's behavior by any significant degree except in the most transient conditions.

The sociopathic illness threatens our life, our property, and the very structure of society in general.

References

Arieti, S.: American Handbook of Psychiatry, 1:567, 1959.

Cleckley, Hervey M.: Mask of Sanity. St. Louis, Mosby, 1955.

Louisiana Revised Statutes of 1950, 9:14:13, p. 44.

Mauths, S.: A concept of psychotherapy and psychopathic personality; its evolution and historical development. J. Crim. Psychopathol., 2:329, 1941.

White, Robert M.: The Abnormal Personality. New York: Ronald Press, 1956.

Drug Testing is Sort of Like Swimming

The testing of drugs for human use will always be a bit like a proposed swim in an inviting pool: though one may check the water for depth, temperature, pH, salinity, and even bacterial count, and though one may send out the family's pet Chihuahua or macaque as a vanguard, one can never experience fully the feel of the water until one's own hesitating foot has been resolutely, unwaveringly, and irrevocably dipped beneath the surface.—Charles S. Sherwin, M. D., in **St. Louis Medicine,** August 31, 1962.

Diabetes Insipidus with Superimposed Pregnancy

• The author gives a case history and informative discussion of the rare situation in which diabetes insipidus and pregnancy are treated successfully.

C. J. GULOTTA, M. D.
W. D. BEACHAM, M. D.
H. D. WEBSTER, M. D.
New Orleans

DIABETES insipidus is in itself an uncommon disease, however, the coexistence with pregnancy is even more uncommon. In a review of the obstetrical records of Southern Baptist Hospital in New Orleans from 1926 to 1962, during which period there were 82,000 deliveries, the case herein reported is the only documented case that could be found. Hendricks[1] in 1954 reported 50 cases as having been recorded in the literature up to that time.

The combination of pregnancy and diabetes insipidus poses physiological questions not only related to water balance but also to uterine contractility. They are both dependent, for their proper function, upon an intact posterior pituitary gland and hypothalamus.

Case Report*

Antecedent History

The patient, an operating room nurse, was first seen by us in 1954, when she was 27 years of age at which time she was pregnant. Her pregnancy was characterized by premature labor and the delivery of twins, one of whom failed to survive. At that time she presented normal physical findings. The blood pressure was 110/70; urinalysis revealed no abnormalities and a specific gravity of 1.020. The hemoglobin was normal.

The patient was readmitted to the hospital for three days in January of 1955 for a severe gastroenteritis and urticaria. At that time she had a blood pressure of 110/70, a fasting blood sugar of 82 mg per cent, a nonprotein nitrogen of 25 mg per cent and a normal urinalysis with a specific gravity of 1.003.

In December of 1955 she delivered at term a normal male infant. There were no complications. The urinalysis at this time showed a specific gravity of 1.034 and the blood pressure was 120/80.

Present History

She was next seen in July of 1959 complaining of severe thirst and excessive urination. These symptoms she had been experiencing for three months. The frequent voiding had not been accompanied by dysuria. The quantity at each voiding was said to be very copious and she stated that she was voiding every thirty to forty-five minutes during the day and almost as frequently at night. There was no history of renal disease in the past. Direct questioning revealed no history of headache, visual disturbances or head injury.

Upon reviewing the systems she complained of fatigue, a decrease in appetite and severe dryness of the skin and buccal mucosa. There had been no weight loss or fever. There were no symptoms referrable to the eyes, ears, nose or throat other than dryness. There were no cardiorespiratory symptoms. The gastrointestinal review revealed that she had vomited twice during the past three months and had developed mild constipation. Except for polyuria there were no genitourinary complaints and menstruation was normal. There were no neuromuscular symptoms.

The family history revealed that there were three siblings living and well, her father was well and that her mother had diabetes mellitus. The patient was not aware of any relative with diabetes insipidus.

Physical Examination

Upon physical examination she was found to weigh 119 pounds, have a temperature of 98.4, a pulse rate of 84 per minute and blood pressure

* From the Department of Medicine, Louisiana State School of Medicine; the Department of Obstetrics & Gynecology, Tulane University School of Medicine and The Southern Baptist Hospital in New Orleans, Louisiana.

of 110/70. She did not appear to be acutely ill. Her skin was warm, very dry and her face at that time was somewhat florid. There was no lymphadenopathy. Fundiscopic examination revealed a normal retina and normal optic discs. Gross visual field examination disclosed no deviation from normal. The mucus membranes of the mouth and throat were extremely dry. There was no thyroid enlargement. The lungs were clear and resonant, and examination of the heart revealed no enlargement, murmurs or arrhythmias. There were no areas of tenderness within the abdomen nor any masses or enlargements of any organs. Examination of the extremities revealed no abnormalities. Pulsations of the peripheral arteries were full and normal. A complete neurological examination failed to reveal any neurological deficit.

Laboratory Findings

Laboratory studies revealed a normal urine except for a specific gravity of 1.001. The hemogram demonstrated a hemoglobin of 13.5 gms per cent, a red blood count of 4,300,000, a white blood count of 7,000 with 54 per cent neutrophiles, 5 per cent eosinophiles, 40 per cent lymphocytes and 1 basophile. The nonprotein nitrogen was 32 mg per cent, the fasting blood sugar was 100 mg per cent, the PSP test 55 per cent during the first hour and 15 per cent during the second hour. The serum uric acid was 2.5 mg per cent, the serum potassium was 4.5 meq/liter and serum calcium was 5.1 meq/liter. A stool examination revealed no parasites. Stereoscopic films of the skull demonstrated no signs of increased intracranial pressure and there was no enlargement of the sella turica nor any abnormalities of the anterior or posterior clinoid processes. There was no suprasellar calcification.

The urinary output was measured and found to be seven liters in a 24 hour period. The Carter-Robbins[8]† test was performed whereupon it was disclosed that in two hours there was no urinary suppression after 2.5 per cent saline administration, which indicated the virtual absence of the antidiuretic hormone.

Since the publication of a simpler test by Jadresic and Maira in 1962[9] which is a modification of the Carter-Robbins test, it has been performed on our patient. Eighty-two per cent of the 1000 cc of 1 per cent saline ingested was recovered in two hours. This conforms well with the Carter-Robbins test previously performed.

Treatment

After establishing a diagnosis of diabetes insipidus she was given a therapeutic test with pitressin tannate in oil whereupon there was a dramatic disappearance of polyuria. The urinary output in the subsequent 24 hour period was reduced to 1500 cc. She has been maintained during the past three years on 1 cc pitressin tannate in oil given at 24 to 72 hour intervals. She has been tried on pitressin by intranasal insufflation but this method was unsatisfactory due to nasal irritation.

Course

About eighteen months after she had been on pitressin she developed, a few minutes after the administration of a dose, severe hyperventilation followed by carpopedal spasm. This had all the appearances of a hyperventilation syndrome, however, because of the fact that patients with aldosteronism may develop polyuria, polydipsia and tetany, serum electrolytes studies were done, which included serum sodium, potassium, chlorides, calcium, phosphorus and CO_2 combining power. All of these tests were within normal limits.

In June of 1961 complete history and physical examination were again performed with no disclosure of additional positive findings. She was getting along well on the dose of pitressin. Skull films were repeated at this time and these failed to disclose any abnormalities. The specific gravity of the urine at this time was 1.010.

In July of 1961 she became pregnant. During gestation there was practically no alteration in pitressin requirement except that there were periods during the last two months of pregnancy in which she was able to prolong the interval between doses to 96 hours. At the seventh month of pregnancy she was admitted for vaginal bleeding and threatened labor, however, this subsided quickly and she was discharged three days later. During this admission the specific gravity of urine was 1.007. The hemogram was normal as were the serum electrolytes. The blood urea nitrogen was 7 mg per cent.

In April, 1962 she was admitted in labor and delivered a full term normal infant without complications. The duration of labor was 6 hours. During the immediate postpartum period and since that time, the pitressin requirement has remained about the same.

Discussion

Diabetes insipidus is a relatively uncommon disease and when pregnancy is superimposed it poses questions not only related to water balance but also questions concerning uterine contractility since both are dependent upon hormone production from the posterior pituitary and hypothalamus. In addition, it is also known that the hypothalamus is intimately concerned

† Carter-Robbins test consists of giving 2.5 per cent saline intravenously, injecting 0.25 ml. per kilo per minute for 45 minutes—or approximately 500 ml.

and related to posterior pituitary function. The hypothalamus is sensitive to changes in the concentration of the solute within the extracellular fluid. These osmoreceptors bring about an increase or decrease in hormonal antidiuretic materials produced by the posterior pituitary, which in turn raises or lowers respectively renal output of water. By means of these mechanisms, excess of water which lowers the solute concentration is excreted whereas on the other hand, deficiencies in water will increase the solute concentration and cause a suppression in urinary flow.

It has generally been assumed that the posterior pituitary is the only site for the production of the antidiuretic substances, however humoral agents are present within body fluids even after hypophysectomy and these are believed to emanate from the hypothalamus.[2]

Injury to the hypothalamus, the supra-optic nuclei, the hypothalmic-hypophyseal tract or to the posterior pituitary can result in diabetes insipidus. In a series of 65 cases reported by Thomas,[3] one-third were due to intracranial tumors, one-third were of unknown etiology and the remaining one-third were ascribed to various granulomas or inflammatory lesions at the base of the brain. In 112 cases reported by Blottner,[4] 50 cases were without known etiology. Weil[11] is of the opinion that heredity plays a great role since 35 members of a family of 220 were noted to have the disease.

Destructive lesions of the posterior lobe which leave some hypophyseal tissue intact in the infundibulum do not result in diabetes insipidus. Accordingly, the condition is rarely seen with lesions such as pituitary adenomas which are limited to the sella turcica. However, lesions of the hypothalamus and craniopharyngiomas which arise from the pars tuberalis, that portion of the hypophysis on the inferior surface of the hypothalamus, are frequently associated with this condition.

The fact that the case herein reported had no prolongation of labor and had no difficulty with uterine inertia is strongly indicative that the posterior pituitary was intact and able to produce oxytocin. Two cases presented by Warren and Jernstrom had normal deliveries and required no oxytocics.[5] Experimentally however, bilateral interruption of the supra-optic-hypophyseal tract has been followed by diabetes insipidus and clearcut dystocia with death during labor in cats and guinea pigs attributable to lack of oxytocin.[6] This is apparently at variance with what is seen in humans in the two cases presented by Warren and Jernstrom. However, in neither of these two cases was a specific lesion anatomically demarcated as in experimental animals.

Diagnosis

The diagnosis of diabetes insipidus should be suspected in any patient who presents with persistent polyuria and polydipsia. The presence of a specific gravity of the urine of 1.001 to 1.003 which cannot be raised above 1.010 with water deprivation is reason for further presumption. At times it may be difficult to separate psychogenic polyuria and polydipsia from true diabetes insipidus, in which cases the administration of hypertonic saline will cause marked reduction in the urinary output in the psychogenic patient and will not affect the continued copious outpouring of urine in the patients with diabetes insipidus. Three hypertonic saline tests have been described, that of Hickey and Hare,[7] the Carter-Robbins test[8] and more recently a much simpler test described by Jadresic and Maira.[9] The final test for this condition is the response to the administration of pitressin which causes a cessation of polyuria and an increase in the urine concentration.

The presence of polyuria or polyuria and polydipsia should alert the clinician not only to the possibility of diabetes insipidus and diabetes mellitus but also to the possibility of renal disease, hypercalcemia, primary aldosteronism and functional disorders. Nephrogenic diabetes insipidus is transmitted as a recessive sex-linked characteristic, the complete clinical picture being found only in the male. The disease is usually seen in children when it is asso-

ciated with mental retardation and hypernatremia. These patients fail to respond to pitressin.

Once the diagnosis is established, the most effective form of therapy is pitressin tannate in oil. Usually 1 to 1½ units will have a duration of effective action varying from 24 to 72 hours. Recently the administration of chlorothiazide has appeared effective in hereditary nephrogenic form of diabetes insipidus and even some cases of acquired diabetes insipidus as reported by O'Doherty, Slater and Rosser.[10] The combination of chlorothiazide with pitressin has been tried on this patient, however, no beneficial effect could be ascribed to chlorothiazide.

Summary

A case of diabetes insipidus complicated by pregnancy is presented. All observations in this case would seem to indicate that neither condition exerted an adverse effect on the other. The pertinent physiologic considerations are discussed.

References

Gillman, A., Goodman, L. S.: J. Physiology 90:113, July 15, 1937.

1. Hendricks, C. H.: Obstetrical and Gynecological Survey, 9:323, June, 1954.
2. Craxotto, H., Barnafi, L., Lopez, R., and Andrade, F.: Metabolism, 3:32, January, 1954.
3. Thomas, W. C., Jr.: J. Clin. Endocrinology, 17: 565, 1957.
4. Blotner, H.: Diabetes Insipidus, Oxford Loose-Leaf Medicine, 179, New York, Oxford Univ. Press, 1951.
5. Warren, J. C., Jernstrom, R. S.: Am. J. Obst. & Gyn., 81:1036, May, 1961.
6. Fisher, C., Magorin, H. W., and Ranson, S. W.: Am. J. Obst. & Gyn., 36:1, 1938.
7. Hichey, R. C., and Hare, K.: J. Clin. Endocrinology, 23:768, 1944.
8. Carter, A. C., Robbins, J.: J. Clin. Endocrinology, 7:753, 1947.
9. Jadresic, A., Maira, J.: Simple Test for Diabetes Insipidus, Lancet, 1:402, February 24, 1962.
10. O'Doherty, N. J., and Rosser, J., Slater, R. J.: Canadian Med. Assoc. J., 86:559, March 31, 1962.
11. Weil, Alfred: Uber die hereditare Form des Diabetes Insipidus, Deutsches Arch. f. Klin. Med., 93:180, 1908.

What Price Health—Human, That Is

In terms of dollars, when we contrast the scope of our current medical research effort to what we spend on other essential national activities, we are the gnat compared to the elephant. In the fiscal year of 1962, the Federal Government allocated $677 million through the National Institutes of Health to defend us against crippling and killing diseases, as compared with $2.8 billion for our farm price support and related programs. It allocated only $102 million to defend us against cancer, the cause of approximately one death every two minutes, compared with $158 million for agricultural research, including the health of cattle and pigs. It allocated $93 million for research against all heart diseases, America's number one killer, compared with $3.5 billion for the improvement of roads and highways.—David Sarnoff at Albert Lasker Medical Research Awards Luncheon, New York, Nov. 14, 1962.

A Culture Medium for the Detection of Candida Albicans in Office Practice*

• A satisfactory laboratory method for office culture of Candida albicans is presented by the author. A discussion of the clinical advantages of identification shows that this is valuable.

B. C. SLAUGHTER, M. D.
G. A. DAVIDSON, M. D.
O. T. WOODS, M. D.
Dallas, Texas

Introduction

CANDIDIASIS is important, not only as a primary pathological condition, but increasingly as a by-product of long-term or intensive antibacterial therapy that alters the endogenous flora, permitting the overgrowth of organisms that are not sensitive to the anti-infective agent used. *Candida albicans*,[1-4] although usually a harmless commensal, can produce both superficial and deep-seated pathological conditions when the internal ecology is disturbed;[5-8] therefore, the possible presence of a candidal infection should be investigated in any antibiotic-resistant condition, particularly after the patient has received a broad-spectrum antibiotic. This precaution is all the more important now that antifungal antibiotics have become available.[4, 9-11]

Unfortunately, the available methods for the isolation and identification of *Candida* and its principal if not sole pathogenic species, *C. albicans*, were difficult and tedious and thus unsuitable for office practice. There are now available, however, special culture media on which different yeasts grow in characteristic fashions, while the growth of other microorganisms is suppressed or at least inhibited. One of these, developed by Pagano and his associates,[12, 13] has been used in private practice by the authors. The results of that investigation form the subject of the present report.

MATERIALS AND METHODS

Patients

Each of the 84 patients in the present series, all of them seen in private practice, exhibited infectious processes, many of them exudative. The sites of the lesions included the mouth, throat, tonsils, tongue, external ear and auditory canal, the vagina and uterine cervix, the fingernails and palm, the hair and scalp, the lower lip, and the anus. The etiology of these cases was obscure; hence the importance of differential diagnosis in them.

Culture Medium

The special growth medium used for the detection of *C. albicans* was the Pagano-Levin Medium,† a nutrient similar to Sabouraud's agar but containing the broad-spectrum antibiotic neomycin to prevent, or at least to inhibit, the growth of bacteria, and a tetrazolium salt. On this preparation, *C. albicans* grows in smooth, creamy white to faintly pink colonies, whereas most other species of *Candida* and other yeasts produce colonies that are red in color. An exception is *C. krusei*, which also grows in white colonies. These, however, are flat, dry and wrinkled in appearance and are thus readily distinguishable from *C. albicans* colonies. Bacterial colonies, when they do occur, are usually red in color.

* From the Dallas Medical and Surgical Clinic, Dallas, Texas.

† Kindly supplied by John T. Groel, M. D., of the Squibb Institute for Medical Research, New Brunswick, N. J.

Procedures

Specimens were swabbed directly from accessible lesions with sterile cotton swabs that were provided with the medium and were placed on the agar slants with a rolling motion. While two or three days at room temperature is all that is required for the development of colonies, no specimen in the present series was incubated for fewer than five days, and some were kept for as many as 21 days. In no case, however, did the extended incubation time reveal the presence of any organisms that were not evident at the expiration of the prescribed incubation time.

Differential diagnosis on the basis of Pagano-Levin cultures were made under any of the following four circumstances: 1) for the confirmation of a diagnosis of candidal infection, 2) as a diagnostic aid when the etiology of a pathological condition was obscure, 3) for the detection of possible candidal overgrowth when a patient had received large or prolonged dosages of antibacterial agents, and 4) to determine the success of treatment with antimycotic agents in cases in which candidiasis had been established.

Medication

While the present communication is basically concerned with diagnosis rather than with treatment, it is not out of place to mention the treatment administered when a diagnosis of candidiasis was established. In most instances, the antifungal agent nystatin (Mycostatin for Suspension‡) was administered orally in the amount of 1 cc. four times daily. In recalcitrant cases, particularly when the lesions were in the oral cavity, the lesions were swabbed with an aqueous solution of 0.25 per cent methylrosaniline chloride. At this dilution, the medication is usually effective but does not induce the tissue damage that is sometimes seen when stronger solutions are used.

Results and Comment

The presence of *C. albicans* was revealed in 34 of the 84 cases included in the present series. The facility with which a differential diagnosis of candidiasis could be made was of considerable therapeutic importance in several cases in which there was a condition that could have been mistaken for a follicular exudative tonsillitis caused by *Corynebacterium diphtheriae* or perhaps a *streptococcus*. Had such a misdiagnosis been made, and had the patient been given an antibacterial agent, the chances are good that there would have been severe exacerbation of the actual candidiasis.

After a period of treatment with nystatin or methylrosaniline chloride, it was deemed advisable, after the lesions had cleared, to determine whether *C. albicans* was still present. In several instances, this proved to be the case, and antimycotic therapy was continued until the pathogen no longer appeared upon culture. Had therapy been suspended on the basis of the clearing of the lesions, these patients might well have suffered relapse.

Summary

A recently developed growth medium for the differential diagnosis of candidiasis by routine culture (Pagano-Levin Medium) was used in 84 patients with lesions of possibly candidal etiology in various sites. *C. albicans* was detected in 34 of these cases, and appropriate antimycotic therapy (oral nystatin and/or topical methylrosaniline chloride) was instituted.

The use of the diagnostic medium permitted the detection, in several cases, of candidal infections that otherwise might have been misdiagnosed as follicular exudative tonsillitis of bacterial origin. Also, the use of the Pagano-Levin Medium to check on the possible persistence of *C. albicans* in several cases of oral candidiasis that had apparently cleared indicated that the pathogen was still present. Antimycotic therapy was thereupon continued; had it not been, there is likelihood that these patients would have undergone a relapse.

It is our experience that the use of the Pagano-Levin Medium permits the rapid

‡ Mycostatin® is a Squibb trademark.

and exact determination of the presence or absence of *C. albicans* and is thus of great value in cases of doubtful etiology or in which antimycotic agents are being used.

Acknowledgments

The authors extend their thanks to S. S. Baird, M. D., J. B. Bourland, M. D., J. W. Bourland, M. D., W. W. Hoffman, M. D., P. E. Luecke, Sr., M. D., and P. E. Lueke, Jr., M D. for their permission to include reports on some of their patients in the present study and to Miss Mary Allen and Miss Faith Wayne for their invaluable technical assistance.

The medications mentioned in the present communication are nystatin (Mycostatin) and methylrosaniline chloride.

References

1. Van Oettingen, W. F.: Complications of antibiotic therapy. Amer. J. Med. 18:792, 1955.

2. Jones, C. P., Carter, B., Thomas, W. L. and Creadick, R. N.: Antibiotic and chemotherapeutic agents in obstetrics and gynecology. Obstet. & Gynecol. 5:365, 1955.

3. Moreton, J. R. and Friend, D. G.: Iatrogenic diseases of the gastrointestinal tract. Postgrad. Med. 26:14, 1959.

4. Stough, A. R., Groel, J. T. and Kroeger, W. H.: Amphotericin B, a new antifungal agent for the prophylaxis of antibiotic-induced monilliasis. Antibiotic Med. & Clin. Therapy 6(11):653, 1959.

5. Perl, G., Guttmacher, A. F. and Jakubowicz, H.: Vaginal candidiasis; a new method of diagnosis and treatment. Obstet. & Gynecol. 5:640, 1955.

6. Younger, D., Epifano, L. D. DiPillo, F., Hoffman, I., Thaler, E. and Yarvis, M.: A clinical comparison of the side effects of tetracycline nystatin and tetracycline. Antibiotic Med. & Clin. Therapy 6(54):216, 1959.

7. Pearl, M. A. and Sidransky, H.: Fungus diseases of the lung in patients treated with corticosteroids and antibiotics. Bull. Tulane Univ. Med. Faculty 19:14, 1959.

8. Karafin, L., Lamberti, A. J., Spaulding, E. H. and Conger, K. B.: Tetracycline with and without nystatin in the therapy of acute urinary tract infections. J. Urol. 81:790, 1959.

9. Hazen, E. L. and Brown, R.: Fungicidin, an antibiotic produced by a soil actinomycete. Proc. Soc. Exptl. Biol. & Med. 76:93, 1950.

10. Steinberg, B. A., Jambor, W. P. and Snydam, L. O.: Amphotericins A and B: two new antifungal antibiotics possessing high activity against deep-seated and superficial mycoses. Antibiotics Annual 1955-1956. H. Welch and F. Marti-Ibanez, Eds. 1956. Medical Encyclopedia. New York, N. Y. :754.

11. Vanderputte, J., Wachtel, J. L. and Stiller, E. T.: Amphotericins A and B, antifungal antibiotics produced by a streptomycete. II. Isolation and properties of crystalline amphotericins. Antibiotics Annual 1955-1956. H. Welch and F. Marti-Ibanez, Eds. 1956. Medical Encyclopedia. New York, N. Y. :587.

12. Taschdjian, C. L.: Isolation and identification of Candida albicans. Monographs on Therapy 1(2):75, 1957.

13. Pagano, J., Levin, J. D. and Trejo, W.: Diagnostic medium for differentiation of species of Candida. Antibiotics Annual 1957-1958. H. Welch and F. Marti-Ibanez, Eds. 1958. Medical Encyclopedia. New York, N. Y. :137.

Not So "Silent Spring"

Rachel Carson is a biologist of considerable stature. She has been a member of the zoological staff of the Marine Biological Laboratory at Woods Hole, has been employed by the Federal Bureau of Fisheries, and was for three years editor-in-chief of **Fish and Wildlife Science** magazine. Besides her master's degree from Johns Hopkins, she holds no less than four honorary doctorates, one in science and three in letters. Her qualifications as a biologist, and more specifically as an ecologist, and her skill as a writer are unquestioned. But there is some serious doubt whether she is well advised to exert her no mean talents to sow feelings of terror in the medical field, where her qualifications are somewhat more in doubt.—Editorial in **Rhode Island Medical Journal**, Oct. 1962.

Adventure in Continuing Medical Education*

• The author comments on the factors involved in making medical education a continuing process and describes the development and functioning of a method which is effective.

RAFAEL C. SANCHEZ, M. D.†
New Orleans

THE need for continuing education is one of the oldest considerations in the practice of any art or science. Plato referred to it in his time as the "Life Long Business of Education".

"The more serious problem today relates to the education of the practitioner after he has left the schools." This was a concern of Sir William Osler, at the centennial celebration of the New Haven Medical Association in his discussion, "On the Educational Value of the Medical Society," on January 6, 1903.

That the American Academy of General Practice is aware of these needs is evidenced by its prime requisite for membership: systematic participation in a program of continuing medical education. That the general practitioner is aware of these needs is evidenced by the "Do It Yourself" project in education developed by practicing physicians in Lake Charles.

In existence since 1959, this pioneering effort was brought to light during the 1961-62 sample survey of general practitioner educational interests and preferences, conducted as a joint undertaking of the American Academy of General Practice, the Louisiana Academy of General Practice and the United States Public Health Service.

Five Academy members in Lake Charles began the "Do It Yourself" project by purchasing copies of a home study course in electrocardiography from the University of Southern California. They needed help, and found an interested internist to study with them and guide their discussions. They met weekly at 7:00 a.m. for breakfast and study sessions that lasted one hour.

Success manifested itself when the study group grew for succeeding courses in chest roentgenology, gastroenterology and non-operative orthopedics. Some participants drove 50 or 60 miles to attend the courses. Interest among specialists also grew, and the general practitioners were joined in their study groups by internists, pathologists, radiologists and surgeons.

Until 1961, the faculty consisted of local interested specialists. In that year, the group approached Dr. William W. Frye, Dean of the LSU School of Medicine. Dr. Frye became interested in the courses and provided LSU faculty consultants who met with the Lake Charles study group.

As interest in this approach to continuing medical education spread, general practitioners in other localities began to adapt the basic idea to their own local interests and needs. To date, four localities have conducted eight courses, with a total of 87 study sessions that have provided 119 hours of continuing medical education for 146 physicians.

In September, 1963 a 10-session course in non-operative orthopedics was begun in Opelousas, with an average attendance of 24 physicians. Recently, 33 physicians in the New Orleans area registered for the first of an 18-session course on electrocardiography. Other courses are scheduled to begin this fall in Alexandria, Donaldsonville, Houma, Lake Charles, Monroe, and Oakdale.

* Presented at the LSU-LAGP Invitational Meeting September 14, 1963, New Orleans, Louisiana.

† LSU-LAGP Project Director in Continuing Medical Education.

This expanding program in continuing medical education is being conducted as a cooperative effort of the Louisiana State University School of Medicine and the Louisiana Academy of General Practice, and is supported in part by a contract with the United States Public Health Service.

Continuing medical education in Louisiana is not new. The Academy of General Practice, the medical schools, and other organizations and institutions have been actively concerned with the matter for many years. But now there are perhaps a different philosophy, a new approach, and a closer working relationship between the medical educator and the practicing physician.

General practitioners recognize the medical school as the authoritative center for learning, and they have made demands of the school. They have told the school that they want participative learning experiences—that they want information of a practical nature, i.e., immediately applicable in the performance of their practice—that they want to take part in the planning of their continuing education—and that they want educational courses to be easily accessible to their place of practice. These challenges have been met with a most gratifying and cooperative response from Dean Frye and the faculty at the LSU School of Medicine. And, while concerned with the construction of more buildings, more lecture rooms, and more walls, LSU has in effect *removed the walls* from university teaching on the postgraduate, or continuing, level.

Physicians in general practice look on the LSU-LAGP project as an opportunity for the exchange of ideas and opinions—for a true consultation service. The cooperative approach affords a unique opportunity for the practicing physician and the medical educator to become better aware of each other's problems and concerns. The academician can better appraise the effectiveness of his teaching. He can bring to the school of medicine the current attitudes and problems of the practicing physician. The practitioner can become more sensitive to, and sympathetic with, the problems faced by the medical educator and the medical school.

Will Rogers once said, "We are all ignorant—we are just ignorant about different things." A commentary by Donald Peattie on this summarizes the realization that the Academy and the medical school have of their mutual needs, "The know-how of the expert can be, without wider vision, no more than a blind alley. The fixed idea of the opinionated is as dangerous as a blunt instrument. And the complacency of the incurious is a kind of death in life."

And who will benefit from this joint effort in continuing education? The medical educator, yes — the practicing physician, greatly — the patient, mostly. Together they can work to insure that the quality of medicine practiced in every community in Louisiana, regardless of size, is the best medicine available under a system of free enterprise.



Legislating Against the Patient

No one will deny that a strong Food and Drug Act is necessary to protect the public. But the intended (FDA) regulations will increase the cost of screening new drugs, will limit the number of new drugs approved, and may prevent many excellent medications from reaching the doctor. The . . . legislation will adversely affect the very person the law was meant to protect—the patient.—W. D. Paul, M. D., in **New Medical Materia, Feb. 1963.**

The Journal of the Louisiana State Medical Society

Established 1844

Published by The Journal of the Louisiana State Medical Society, Inc. under the jurisdiction of the following named Journal Committee:

George H. Hauser, M. D., Ex-Officio
J. E. Knighton, M. D., Chairman
Sam Hobson, M. D., Secretary
A. V. Friedrichs, M. D.
H. H. Hardy, Jr., M. D.
M. D. Paine, Jr., M. D.

EDITORIAL STAFF

PHILIP H. JONES, M. D., Editor

COLLABORATORS—COUNCILORS

Nicholas J. Chetta, M. D.
J. E. Clayton, M. D.
Guy R. Jones, M. D.
C. E. Boyd, M. D.
Frederick A. Marx, M. D.
John L. Beven, M. D.
J. Y. Garber, M. D.
R. E. C. Miller, M. D.

C. GRENES COLE, M. D., General Manager
1430 Tulane Avenue

Subscription Terms: $4.00 per year in advance, postage paid, for the United States; $5.00 per year for all foreign countries belonging to the Postal Union.

News material for publication should be received not later than the eighteenth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

Manuscripts should be addressed to the Editor, 1430 Tulane Ave., New Orleans, La.

The Journal does not hold itself responsible for statements made by any contributor.

Editorial

Continuing Medical Education

Knowledge in all its spheres is increasing rapidly; the same can not be said for wisdom. In the field of medicine the developments are more rapid and more extensive than in any other. The physician is confronted on the one hand by the incessant demands and difficulties of practice, and on the other by the need to keep aware of the current thought and investigation.

Medicine has provided many ways in which this can be done. Specialty groups arrange lectures and demonstrations. Local societies have sponsored graduate medical assemblies. Universities have sponsored intensive courses on special topics. Correspondence courses have been made available. All of these are of great advantage to many physicians; however, those facilities available are adapted principally to specialty patterns. In line with what is desirable in this field, the American Academy of General Practice has made and continues a sustained effort in postgraduate or continuing medical education. In connection with this endeavor a survey[1] was made in Louisiana of educational interests and preferences of general practitioners. It was found that the interests and preferences of physicians were not determined in advance by those directing educational facilities; attempts were made to attract physicians to programs without providing what they wanted. It was also found that educational facilities frequently employed nonparticipative learning methods, that is lectures and panel discussions. Programs tend to be centered in the larger cities without coordination between each other. These educational facilities do not assess their results in terms of the increase of the physician's knowledge, skill, and application of learning to practice.

The survey further showed general practitioners are not a homogenous group in any respect. They prefer programs employing participative learning methods.

1. Educational interests and preferences of general practitioners, American Academy of General Practice, Inc., 1961-1962.

2. DeLay, William R.: Medicine with breakfast: Louisiana's formula for continuing medical education, GP, Volume XXVI, No. 5, Nov., 1962.

3. Sanchez, Rafael C.: Adventure in continuing medical education, presented at the LSU-LAGP Invitational Meeting, Sept. 14, 1963.

that is demonstrations and clinical instruction. They prefer learning experiences of a practical nature, which are immediately applicable to their own practice situation. Availability of an educational facility is of prime importance to the general practitioner.

While this survey was in process, investigators discovered a plan[2] of continuing medical education working in the Lake Charles area. The evolution and operation of this plan, which is available to general practitioners and specialists, was recognized as being of great importance. In 1959 five physicians in the Lake Charles area under the leadership of Dr. Eli Sorkow completed an extension course, in electrocardiography, of the University of Southern California. The benefits from their efforts prompted them to arrange with proper help a course in roentgenology. To this course came other general practitioners and some specialists. Subsequently, there was an appeal to Dean Frye of the Louisiana State University School of Medicine. With the help of the university and a grant by Eli Lilly, the group was able to arrange courses in the fields of their choice. During this period, physicians from the surrounding area began to attend the 7 a.m. sessions which were held every two weeks.

The subjects under study were those requested and decided by the participants, and their attendance testified to their sustained interest. Its success gives a promise of such a plan being effective far into the future.

In another part of this journal, (page 390) under the title, "Adventure in Continuing Medical Education", Dr. Rafael Sanchez,[3] Director of the Louisiana State University - Louisiana Academy of General Practice Project in Continuing Medical Education, discusses the background and progress of the plan. It was recognized that the plan had merit for other communities of the state, and is capable of being adapted to many areas of the country. Noteworthy are the facts that the physicians decide what they want, and that efforts are made to bring the material to them, to approximate their convenience, and to present it in the form in which it will be most readily used.

It is realized that in the process of teaching, the most effective factor that can promote success is a desire to learn on the part of the seeker after knowledge. In this situation, the physicians are presented with material in which they have expressed an interest. They are gratified by their success in grasping it. To such an extent, as is practicable, those in attendance participate in the presentations which are conducted informally. In no other field of human activity is the dictum any more true than in medicine—"We learn to do by doing".

The Lake Charles group and the other participants are to be congratulated on evolving an effective method to help the physician. Courses are now in process in many areas of the state to the advantage of all.

Diabetes Week

For some years the American Diabetics Association, the membership of which is limited to physicians, has conducted an annual week long effort to discover hidden diabetics.

It is felt for every diabetic under treatment, there is one unknown to his physician and unto himself. The aim in Diabetic Week is to discover this unknown diabetic. When knowledge of existence of diabetes is brought to the patient and his physician, the train of events can be set in motion which is greatly to the advantage of the patient, although he may be most reluctant to accept and realize the facts of his situation.

The efforts of the physicians who represent the American Diabetic Association in our several communities deserve the full cooperation of every physician. *Noblesse oblige* applies very properly to our situation.

ORGANIZATION SECTION

The Executive Committee dedicates this section to the members of the Louisiana State Medical Society, feeling that a proper discussion of salient issues will contribute to the understanding and fortification of our Society.

An informed profession should be a wise one.

AN HONEST APPEAL FOR MEMBER COOPERATION

In addition to being a wife and mother, the doctor's wife serves her physician husband in countless ways in his daily practice.

One of the most important ways a doctor's wife can help her husband is by being an active member of the Woman's Auxiliary of the Louisiana State Medical Society.

If the wife of each member of the Louisiana State Medical Society belonged to the Woman's Auxiliary, the effectiveness of many of the Society's activities and programs could be doubled. The Auxiliary conducts many fine programs of its own such as the Today's Health project, Doctors Day, the Annual Essay Contest, Community Service and many others. A number of Auxiliary programs like legislation, health careers, AMA-ERF and civil defense are similar to other programs carried out by the Society.

At the present time, the Woman's Auxiliary is doing yeoman's work in the all-important "Operation Hometown" program. The Louisiana State Medical Society has a membership of approximately 2700 physicians. The Auxiliary has, at the present time, 1562 members. Think for a moment how much more the Auxiliary could contribute to these vital programs if all of the wives of our members belonged to the Auxiliary.

There is no group better equipped to help tell our story than our wives. By making our wives full members of the medical society team, they can help get our story to many, many more people.

The only way the medical profession will be able to preserve the free private practice of medicine in the face of constant new threats of socialism is by getting its story across to all of the people. The public must be constantly reminded of the great progress that has been made under the free enterprise system and warned of the dangers of increased governmental control of our profession.

This is a job the members of the Woman's Auxiliary can do and are doing. They tell our story and they tell it well; however, they could tell it much better if each member's wife helped by belonging to the Auxiliary.

The membership in the State Auxiliary costs a modest $2.50. This is a small price to pay for the many benefits doctors receive from the work performed by these ladies. Membership in the AMA Auxiliary is only $1.00.

All Society members should encourage their wives to be active members of the Woman's Auxiliary. Please cooperate with us in this respect.

C. GRENES COLE, M. D.
General Manager

STATUS OF THE PRESCRIPTION DRUG INDUSTRY'S PETITION CHALLENGING CERTAIN FDA REGULATIONS OVER Rx ADVERTISING

It is thought that the information contained in the following memorandum released by the Pharmaceutical Manufacturers Association will be of interest to our members.

Regulations were published by the U. S. Food and Drug Administration on June 20, 1963 to implement portions of the 1962 Drug Amendments to the Federal Food, Drug, and Cosmetic Act, regarding prescription drug advertising copy requirements. Certain sections of those regulations were challenged in a petition filed by the Pharmaceutical Manufacturers Association and 45 of its member firms on July 19. The public hearing on the matter, requested by the petitioners, has now begun.

Binding interpretations concerning several sections of the regulations, supplied for the record by FDA at the petitioners' request, and a draft of one new section prepared for publication, resolved all but one of the issues raised in the petition, making further proceedings in connection with these sections unnecessary. These are discussed below.

Remaining at issue is the legal question of whether FDA can lawfully prohibit the advertising of certain prescription drugs which have been used satisfactorily for years and the continued marketing of which was expressly protected by Congress in the 1962 Drug Amendments without further restriction.

One section of the regulations at issue in the hearing, as published on June 20, was felt by the petitioners possibly to require the prepublication submission to FDA of advertising for virtually all important new drugs. In an interpretation introduced into the record, the Commission of Food and Drugs confirmed that preclearance would be "a relatively rare occurrence". The regulation itself is being specifically revised to meet industry objections. As revised, the regulation will require "prior approval" of advertisements by FDA only if the agency or the sponsor of the drug receives in-

formation not widely publicized in medical literature that use of the drug may cause fatalities or serious damage; and if, after evaluation of this information, the Commissioner of Food and Drugs informs the sponsor that the information must be a part of his advertisements for the drug; and finally if the sponsor does not offer, within a reasonable specified time, a program to the FDA of adequate publicity to the medical profession of the information in subsequent advertisements. The petitioners regard such a regulation as appropriate in the interest of the public health and in keeping with the 1962 Drug Amendments.

Another issue raised by the petitioners concerned sections of the regulations relating to "fair balance" and "relative prominence" of information on effectiveness and precautions in use of prescription drugs in advertising copy and layouts. In formal written statements by the Commissioner on the meaning of the regulations and introduced in the record, FDA has assured that the regulations will not prohibit use of graphic presentations, headlines or other "advertising techniques". The regulations, as now clarified by the agency, will not require equal divisions of space, word counts, headlines, illustrations and so forth. On the other hand, the regulation will require that statements about precautions for use of drugs be presented in type and format to insure adequate prominence and readability. Again, the petitioners find that this interpretation of "fair balance" is in the interest of fair representation to the medical profession and of the public health, in light of the 1962 Drug Amendments.

An additional question by the petitioners concerned an apparent requirement of the new regulations that advertisements must list side effects and contraindications for all common uses of a given drug, even if some of the uses are not referred to in the advertisement. In a clarifying statement by the Commissioner, made a part of the record, FDA said, in effect, that the non-recommended uses not be mentioned in most instances—that since side effects depend for the most part on duration of use, size of dosages or class of patients, it is appropriate that the side effects be disclosed only as related to these factors. This statement serves to remove the principal concern of the petitioners on this point.

At the hearing the petitioners stated that the formal interpretations by the Commissioner of Food and Drugs, Mr. George Larrick, together with the revised section of the regulations dealing with preclearance of advertisements, were reasonable and satisfactory, and eliminated the necessity for further hearings.

A further issue not involved in the FDA hearing remains and is the subject of a separate contest filed by PMA and 37 of its member firms in the U. S. District Court at Wilmington, Del., on Sept. 5. In that action, the plaintiffs challenge sections of the regulations which would require that the established or generic name of the drug must accompany each separate mention of the drugs proprietary or brand name in an advertisement and in labeling. The plaintiffs maintain that these regulations go beyond the FDA's statutory authority, since the statute requires only that established names of prescription drugs be printed in labeling and advertising "prominently and in type at least half as large as that used for any proprietary name."

This memorandum represents an effort to summarize briefly for your information the substance of these proceedings. For more detail you are invited to refer to the hearing record and exhibits, available on request from the PMA office or by inspection at the office of the FDA Hearing Clerk.

MEDICAL NEWS SECTION

CALENDAR

PARISH AND DISTRICT MEDICAL SOCIETY MEETINGS

Society	Date	Place
Ascension	Third Tuesday of every month	
Calcasieu	Fourth Tuesday of every other month	Lake Charles
East Baton Rouge	Second Tuesday of every month	Baton Rouge
Jefferson	Third Thursday of every month	
Lafayette	Second Tuesday of every month	Lafayette
Lafourche	Last Tuesday of every other month	
Morehouse	Third Tuesday of every month	Bastrop
Natchitoches	Second Tuesday of every month	
Orleans	Second Monday of every month	New Orleans
Ouachita	First Thursday of every month	Monroe
Rapides	First Monday of every month	Alexandria
Sabine	First Wednesday of every month	
Tangipahoa	Second and fourth Thursdays of every month	Independence
Second District	Third Thursday of every month	
Shreveport	First Tuesday of every month	Shreveport
Vernon	First Thursday of every month	

SYMPOSIUM ANNOUNCEMENT

On January 30-31, 1964 a Symposium on **Scintiscanning in Clinical Medicine** will be held in Winston-Salem, N. C. sponsored by the Department of Radiology of the Bowman Gray School of Medicine.

Subjects to be covered will include the physical, electrical and pharmacologic principles of organ scanning as well as specific discussions of brain, thyroid, parathyroid, heart, lung, liver, spleen, kidney, pancreas and bone scanning.

The Guest faculty will include Craig Harris, M. S. Oak Ridge; John Hidalgo, M. S. Tulane; John McAfee, M. D. and Henry Wagner, M. D. Johns Hopkins; Merrill Bender, M. D. Roswell Park; David Sklaroff, M. D. Philadelphia; Bruce Sodee, M. D. Walter Reed; William Beierwaltes, M. D. and Edward Carr, M. D. Michigan; Thomas Haynie, M. D. Texas; Joseph Izenstark, M. D. Emory; Albert Gilson, M. D. Miami; Felix Pircher, M. D. Duke; Frances Pepper, M. D. North Carolina; J. M. Miller, M. D. Henry Ford; and I. Meschan, M. D., Joseph Whitley, M. D., and J. L. Quinn, III, M. D. of Bowman Gray.

Registration will be limited to 200. For details write to J. L. Quinn, III, M. D., Nuclear Medicine, Bowman Gray School of Medicine, Winston-Salem 7, N. C.

COURSE IN CORONARY ARTERIOGRAPHY

The Division of Continuing Education of The University of Texas Graduate School of Biomedical Sciences at Houston will present a course on Coronary Arteriography, December 2, 3 and 4, 1963, at the Texas Medical Center, Houston, Texas. Dr. F. Mason Sones, Jr., of the Cleveland Clinic will discuss the evolution of this technic, the normal coronary circulation, the clinical application of cine coronary arteriography and its use in evaluating medical and surgical therapy in patients with coronary artery disease.

For further information write: Division of Continuing Education, The University of Texas Graduate School of Biomedical Sciences at Houston, 102 Jesse Jones Library Building, Texas Medical Center, Houston, Texas 77025.

POSTGRADUATE COURSE IN CARDIOVASCULAR DRUG THERAPY

Hahnemann Medical College and Hospital has announced a postgraduate course in "Cardiovascular Drug Therapy" to be held at the Marriott Motor Hotel, Philadelphia, January 20-23, 1964.

The purpose of this symposium is to evaluate the current cardiovascular armamentarium. The rationale and drug spectrum of antihypertensive drugs, antianginal compounds, diuretic agents, vasopressors, anticoagulant and antiarrhythmic drugs and cardiotonic compounds will be explored in relation to their clinical pharmacologic application.

POSTGRADUATE COURSE IN FRACTURES IN GENERAL PRACTICE

Diagnosis and treatment of the more common fracture problems encountered in general practice will be emphasized in the postgraduate course, "Fractures in General Practice", October 22-24, 1963, to be held at the Medical College of Georgia.

In the 18 hour session, x-rays will be reviewed, fracture patients will be presented, plaster casts and emergency management will be demonstrated. Participation will be encouraged by demonstrations for small groups and many informal discussion and question periods, as well as through lectures. Of special interest is the presentation of individual fracture problems submitted by participants to a panel for their discussion.

Walter P. Barnes, Jr., M. D., Orthopedic Surgeon, Macon, Georgia, and D. Keith McElroy, M. D., Assistant Clinical Professor of Surgery

(Orthopedic), Columbia Presbyterian Medical Center, New York, New York, will be the featured faculty. Coordinators for the course are Floyd E. Bliven, Jr., M. D., Professor of Surgery (Chief, Orthopedic), Medical College of Georgia and James W. Harkess, M.B.Ch.B., Associate Professor of Surgery (Orthopedic), Medical College of Georgia. Faculty members of the Medical College of Georgia will participate.

Each course is acceptable for 18 hours credit by the American Academy of General Practice. Registration is limited to a small group for close faculty-participant communication. Registration fee is $50.00. Application can be made by contacting Dr. Claude-Starr Wright, Director, Department of Continuing Education, Medical College of Georgia, Augusta, Ga.

COURSE OF STAPH INFECTIONS TRACED IN COMMUNITY

Ordinary housekeeping and laundry practices can serve to perpetuate a high level of staphylococcal infections in a community, a Boston research team reported recently.

A study of the factors involved in the high rate of staph disease among 129 families in a housing project for married graduate students was reported in the July 20 Journal of the American Medical Association by Ruth B. Kundsin, Sc.D., Carl W. Walter, M. D., Johannes Ipsen, M. D., and Mary Day Brubaker.

Staphylococci are the cause of most of the superficial pus-forming skin infections in man and have become increasingly important because of their ability to develop resistance to antibacterial drugs.

The study implicated the hospital as the origin of the staphylococci with newborn infants introducing the bacteria into the family when they are brought home, the researchers said. It was also found that bacteria strains introduced into a family more often spread among members of that family than to friends or neighbors, they said.

Thirty-one per cent of the families with children two years old or younger had staph infections, compared with 10 per cent of families with no children or children over two years of age, the researchers said.

"Staphylococci are brought into the family through experience associated with having very young children," they said. "The only obviously common experience is the hospitalization associated with childbirth."

The study revealed a significant difference between the infection rate of families using a community self-service laundry and those using other facilities, usually their own washing machine, the researchers said.

Seventeen per cent of those using the community laundry had staph infections, compared with eight per cent of those who did not, they said.

Other studies have indicated that the detergents used and temperatures attained in home laundering cannot be relied upon to control the transmission of bacteria on textiles and clothing, they said. A combination of soap and water at a high temperature and either sodium hypochlorite or laundry sour or both is required for complete destruction of bacteria on textiles, they said.

Temperatures attained in the wash water of the community laundry ranged from 120 to 149 degrees Fahrenheit, they said, adding:

"This temperature is inadequate for disinfection. Consequently, bacteria must have been redistributed in the family laundry rather than destroyed."

Another aspect of the study revealed that the mother who spends more time in the home than the rest of her family is the most frequent carrier of staphylococci, the researchers said.

"She handles the linen and dishes, cares for infections in others, and by habitual practices of housekeeping apparently determines the dissemination of the family's bacterial population," they said.

NEW ORLEANS ACADEMY OF OPHTHALMOLOGY

New Orleans Academy of Ophthalmology announces its fourteenth annual convention, Roosevelt Hotel, New Orleans, La., February 16 through 21, 1964.

Registration fee of $75.00 includes associate membership in the Academy for 1964, as well as usual features of the meeting. Hotel reservations should be made early by writing directly to Executive Secretary, 517 Godchaux Building, 527 Canal Street, New Orleans, Louisiana 70130.

CANCER THEME OF THORACIC MEET IN NEW ORLEANS

Three top cancer experts came to Louisiana to appear on the program of the medical seminar on Lung Cancer which was presented by the Louisiana Thoracic Society in New Orleans on Saturday, October 12, according to W. A. Cherry, M. D., President of the Society.

John R. Schenken, M. D., nationally - noted pathologist with the Nebraska Methodist Hospital, Omaha, Nebr., appeared on the program which was held in the Louisiana State Medical School auditorium. Dr. Schenken spoke on "General Considerations of the Pathology of Primary Malignancies of the Lung".

Donald L. Paulson, M. D., outstanding thoracic surgeon from Dallas, Tex. presented a lecture on "Presurgical Irradiation for Bronchogenic Carcinoma".

John S. LaDue, M. D., Associate Professor of Clinical Medicine at Cornell University's Medi-

cal College, New York City, spoke on "The Symptomatology and Diagnosis of Lung Cancer".

Accepted for six hours Category II credit by the American Academy of General Practice, the conference was offered without fee to all physicians, medical students and medical educators who were interested. The meeting is a Christmas Seal program of the Louisiana Thoracic Society, medical section of the Louisiana Tuberculosis Association. L.S.U. Medical School is the co-sponsor.

FIFTH ANNUAL PEDIATRIC COLLOQUY

The Hillcrest Medical Center will sponsor its Fifth Annual Pediatric Colloquy on December 6 and 7, 1963, in Tulsa, Okla.

The theme of the Colloquy is Abnormalities of Early Life.

Topics to be discussed are Congenital Anomalies, Enzymopathies, Fetal Environment, Obstetrical Anesthesia, Resuscitation of the Newborn, Evaluation of the Distressed Infant, and Psychic Development of the Infant.

Speakers are: Virginia Apgar, M. D., Director, Congenital Malformations Division, National Foundation, New York; Murdina Desmond, M. D., Associate Professor of Pediatrics—Baylor; Henry Kirkman, M. D., Associate Professor of Pediatrics—O.U.; James A. Merrill, M. D., Professor and Head, Department of Gynecology and Obstetrics—O.U.; and James T. Proctor, M. D., Medical and Training Director—Children's Medical Center—Tulsa.

Details and registration form may be obtained by writing Hillcrest Medical Center, Utica on the Park, Tulsa 4, Oklahoma.

BOOK REVIEWS

Surgery in World War II; J. B. Coates, Jr., M. D., Activities of Surgical Consultants, Vol. I, Medical Department, U. S. Army, Washington, D. C., Government Printing Office, 1962, 621 pp. 104 figures, 31 tables. $6.50.

One might expect a book with a title such as this to be dull reading; actually the opposite is true. The book is interesting, informative and liberally sprinkled with tongue-in-cheek humor.

The authors who contributed to this volume had entered the service from, and have returned to, high academic positions in civilian life. Many are professors of surgery. They write well; the facts they report are accurate; and the recommendations they make in regard to organization of the Army Medical Department in case of another conflict are worthy of serious consideration.

The book is divided into two parts. The first part is concerned with the activities of the Surgical Consultants in the Zone of the Interior; those attached to the Office of the Surgeon General and to various Service Commands. The second part deals with the activities of Surgical Consultants to Field Armies in Theaters of Operation.

The late Brigadier General Fred W. Rankin, Chief Consultant in Surgery to the Surgeon General played a large role in contributing to the success of the Consultant system. He repeatedly stated during the war that the most effective means of providing the highest standards of surgical care for the sick and wounded was to put the right man in the right place. Therefore the most important function of these handpicked Surgical Consultants was the classification and assignment of surgeons according to their qualifications and experience.

There are many humorous passages in the book such as the bewilderment of the Ophthalmology Consultant on learning that he was to be responsible for, not only the rehabilitation of the blind, but also the deaf; or of the Otology Consultant's astonishment on discovering that prior to his own induction, the program for the treatment of defective hearing was under the direction of a psychiatrist. This same consultant reports finding many deficiencies on his early inspections. In one hospital the room for audiometric testing was adjacent to the motor pool. Another difficulty encountered was that the only material available for teaching the hard-of-hearing had previously been in civilian use and was almost entirely directed toward children.

The book documents a great deal of factual information which should be valuable in any future mobilization. It is apparent for example, that Fort Benning, Camp Blanding, Camp Van Dorn, Camp Shelby and other similar facilities were vastly overbuilt and professionally undermanned. Some of these hospitals had 4,000 or more beds and the maximum census was never over 50 per cent of the bed capacity.

Pilonidal sinus evidently became a considerable problem during the war. In September 1944 an

investigation revealed that 435,000 man hours per year were lost because so many different forms of treatment were being employed. It became necessary to issue a technical bulletin directing that patients with uninfected pilonidal sinus not be operated upon and that those having infected sinuses be treated by simple incision and drainage.

The Consultant for the Fifth Army reports that the most serious medical problems in Italy were encountered on the Anzio beachhead, because of the huge amount of surgery required there and because all of the casualties had to be evacuated by sea. The statistics are impressive. Between January 30 and February 22, 1944, the 56th Evacuation Hospital admitted 5,345 patients and operated on 3,663. The 93rd Evacuation Hospital, which was heavily bombed during the same period averaged over 44 operations per day, the number ranging from 4 on one day to 111 on another. During the final offensive, hospitals on the beachhead received 1,400 casualties during the first 24 hours and 800 during the second. Between January 22 and May 22, 1944, U. S. Army Hospitals on the Anzio beachhead handled 33,128 casualties from all causes, and between May 23 and June 4 they handled 15,200. The figures for British Hospitals for the same period are respectively 14,700 and 2,196. In all, 47,193 persons were evacuated from Anzio during the course of the operation.

According to the Consultant for the Third Army, this organization created many records. The Third U. S. Army traveled farther and faster on the ground than any army in history. In 281 days it moved from the beaches of France to the Austrian Alps. During this period the Third Army captured 1,280,688 prisoners, killed 144,500 enemy troops and wounded 386,000 others.

The Medical Service of the Third U. S. Army also set records. During the period cited it treated a total of 313,686 persons, including 5,225 civilians and 23,536 Army personnel.

One of General Patton's strong beliefs, it is related, was that wounded personnel should receive medical treatment in the Army Area if at all possible so that they would not lose contact with their own units. He maintained that a wounded soldier's morale received a tremendous boost when he returned to his own unit; and this produced an equal boost in the morale of the unit. Estimates indicate that about 43 per cent of all casualties handled in the Third U. S. Army Evacuation Hospital were returned to duty in their original units.

Supplying the combat areas with such a perishable commodity as fresh blood posed many problems which were eventually solved. The whole problem for the provision of blood and blood substitutes was a superb national effort. Donations reached 13,326,242 pints by the end of the war and contributed immeasurably to its successful outcome.

In the words of the Surgical Consultant to the Sixth Army, "the well-trained surgeon with years of clinical experience, who was mature in judgment and reasonable in reactions to adverse circumstances, was the one individual in the war who contributed most to the brilliant record of the Medical Corps as far as professional care of the wounded was concerned. In the forward areas capable medical officers put forth superhuman effort, sleeping only a few hours a day, working continuously, and doing more than one individual was reasonably expected to accomplish".

CHARLES V. MENENDEZ, M. D.

Wound Ballistics in World War II; J. B. Coates, Jr., M. D., Editor. Medical Department, U. S. Army, Washington, D. C., Government Printing Office, 1962, 767 pp., 364 figures, 308 tables. $6.50.

Surgeon General Leonard D. Heaton points out in the foreword of this book that there are three basic aims in waging war, namely, developing more lethal weapons for use against the enemy, devising better means of defense against the enemy's weapons, and improving the medical care of those wounded in battle. All of these are bound together by a single thread, the science of wound ballistics.

This volume can be roughly divided into five parts. The first part is devoted to Enemy Ordnance Materiel; it contains detailed descriptions, photographs and firing data of many Japanese, German and North Korean (Russian) weapons such as pistols, rifles, machine guns, mortars, grenades, land mines, howitzers, rocket launchers, and others. This is followed by descriptions in similar detail of various types of ammunition and includes photographs of unexploded shells alongside fragments recovered following explosion. For example after detonation of a German 88 mm. shell, which is about 3½ inches in diameter and weighs 22½ lbs., 1,270 fragments were recovered, weighing 16 lbs. and representing approximately 80 per cent of the original weight. In compiling such fragmentation characteristics, even the weight of each fragment and its distance from the point of burst are recorded.

The second part concerns missile ballistics. Through the ages man has constantly attempted to increase missile speeds because missile effectiveness is a function of velocity. David was well aware of this in his encounter with Goliath, the earliest recorded missile casualty. The sequence has been from clubs through stones, slings, bows and arrows, gunpowder, rifles, bombs and rockets to thermonuclear reactions. Bullets originally were round balls fired from smooth bore barrels

but as velocities increased accuracy was lost. Inaccuracy was caused by air piling up in front of the bullet which forced the ball to follow an erratic course. This problem was solved by spinning which prevented accumulation of air. A .30 caliber bullet has a muzzle velocity of 2,700 feet per second and a spin of more than 3,500 revolutions per second. Such a rate amounts to more than 200,000 revolutions per minute and is 100 times faster than a high speed electric motor which rotates around 1,700 revolutions per minute.

Much of the strange behavior of bullets is due to yaw. Yaw is deviation of the long axis of the bullet from the line of trajectory. It is caused by spin and imperfections in the surface of the bullet, and is comparable to the wobbling of a top that is spinning. To be capable of yaw a bullet must have a long axis. There can be no yaw in a round ball. It is apparent therefore that when a bullet with a great deal of yaw, or angle of deviation, hits a target, it will be deflected off its original path. With a yaw of 90° the side of the bullet would hit the target. When a bullet strikes dry sand or rock secondary missiles are set into motion which may be capable of producing a wound. In aerial bombing, secondary missiles produce more casualties than all other causes combined.

The third part of the book deals with the mechanism of wounding. Almost immediately after impact the high speed bullet produces a temporary cavity more than 25 times larger than the permanent cavity or missile tract. Formation of this temporary cavity causes the extensive tissue damage which is found, even to fracture of an adjacent bone. The temporary cavity is produced by the impact of the missile on the tissues, with the tissue particles themselves all becoming secondary missiles spreading out from the point of impact. The book contains many photographs of temporary cavities in water and gelatin taken with high speed motion picture cameras.

Bones can break from the explosive force, but arteries, veins and nerves, being elastic may be pushed aside. Nerves so stretched frequently lose their ability to conduct impulses, demonstrable clinically and experimentally, and though grossly normal in appearance show evidence of damage on microscopic examination.

A high speed projectile transversing the empty skull of an experimental animal produces only small wounds of entrance and exit, whereas in the same animal anesthetized, a high speed projectile striking the brain-filled cranium causes extensive fragmentation of the entire skull.

The fourth part is devoted to studies of casualties incurred in the New Georgia, Burma, Bougainville and Italian Campaigns and among members of the Eighth Air Force. These chapters in aggregate constitute about one-half of the volume. Though undoubtedly valuable from a documentary standpoint, this section is depressing to review because of the many photographs of mutilated corpses of soldiers killed in battle. Statistics are compiled on extensiveness of wounds, anatomical locations and causative agents, concluding with measures recommended to reduce the risk of wounding, such as protection of cover, minimal exposure of prone position and camouflage.

The fifth and final part of the book concerns the development of protective armor for personnel; there are descriptions of helmets of many types, of body armor, crotch armor, groin armor, lower extremity armor and mobile shields behind which soldiers may take cover.

Bulletproof vests made of plates of nylon or doron were used with success in Korea, and based upon information from many studies relating to protective armor, it is probable that armor would be frequently used in any future conflict. To relieve individuals of the burden of transportation, the armor could be issued to an entire group just prior to a particular engagement. It has been shown that the use of armor definitely increases morale because of the instinct for self-preservation inherent in human nature.

On the whole this is a reasonable, informative book.

CHARLES V. MENENDEZ, M. D.

PUBLICATIONS RECEIVED

(Certain ones of these will be selected for review)

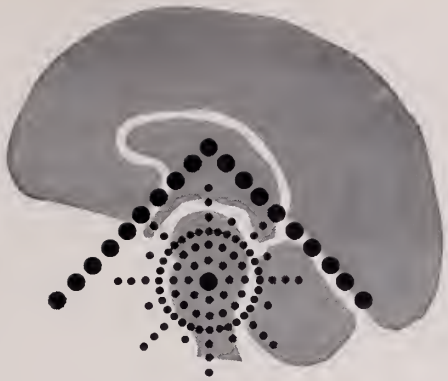
Grune & Stratton, Inc., N. Y.: Progress in Gynecology, Vol. IV, edited by Joe V. Meigs, M. D. and Somers H. Sturgis, M. D.

McGraw-Hill, N. Y.: Fundamentals of Blood Coagulation in Clinical Medicine, by Cecil Hougie, M. D.

Office of the Surgeon General, Department of the Army, Washington, D. C.: Personnel in World War II, prepared and published under the direction of Lt. Gen. Leonard D. Heaton, Editor-in-Chief, Col. John Boyd Coates, Jr.

W. B. Saunders Co., Phila.: Diseases of the Skin: For Practitioners and Students, by George Clinton Andrews, M. D. and Anthony N. Domonkos, M. D. (5th edit.); Principles of Neurological Surgery, by Loyal Davis, M. D. and Richard A. Davis, M. D.; Elementary Medical Statistics, by Donald Mainland, M. B. (2nd edit.).

Charles C Thomas, Publisher, Springfield, Ill.: Calcifications of the Heart, by Jerome H. Shapiro, M. D., Harold G. Jacobson, M. D., Berta M. Rubinstein, M. D., Maxwell H. Poppel, M. D., and John B. Schwedel, M. D.



in visceral motor disorders...

EASIER MANAGEMENT

When emotional disturbance is a significant factor in dysfunction of gastrointestinal tone, motility and secretion, Pro-Banthīne with Phenobarbital provides the dual activity that leads to easier management of both the patient and his problem:

Pro-Banthīne (propantheline bromide) to neutralize the effect of excitatory impulses at visceral end organs, *and*

Phenobarbital to moderate emotional incitement centrally.

Pro-Banthīne with Phenobarbital is indicated when a mild to a moderate psychic element is a factor in: Peptic ulcer • Biliary dyskinesia • Pylorospasm • Intestinal hypermotility • Spastic colon • Gastritis • Other dysfunctions of the gastrointestinal tract.

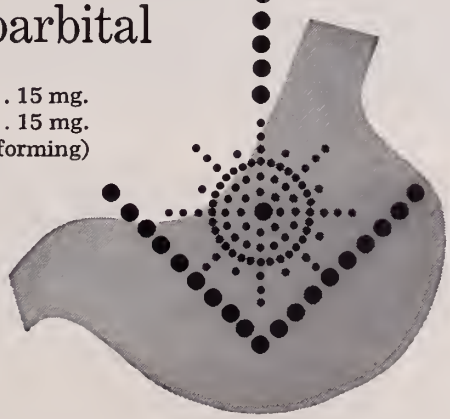
Dosage: One tablet four times a day.

Urinary hesitancy, xerostomia, mydriasis and, theoretically, a curare-like action might occur with Pro-Banthīne (brand of propantheline bromide). It is contraindicated in the presence of glaucoma or severe cardiac disease. The usual precautions with regard to phenobarbital should be taken.

G. D. SEARLE & CO.
CHICAGO 80, ILLINOIS
Research in the Service of Medicine

PRO-BANTHĪNE®
with Phenobarbital

Each tablet contains:
propantheline bromide .. 15 mg.
phenobarbital 15 mg.
(Warning: May be habit forming)





TRIPLE SULFA THERAPY is safe at levels of pH 5.5 or lower where the possibility of crystalluria would be greatest.

TRI-AZO-MUL
TRI-AZO-TAB

TRI-AZO-MUL

Each 100 cc contains:

Sulfadiazine 3.381 gm. (Microcrystalline)

Sulfamerazine 3.381 gm. (Microcrystalline)

Sulfamethazine 3.381 gm. (Microcrystalline)

In a palatable, stable emulsion pleasantly flavored with True Raspberry Flavor. Each average teaspoonful (80 min.) represents .5 gm. (7.7 grs.) of three combined sulfa drugs in suspension. Supplied in pint bottles only.

CONTRAINDICATIONS: Sulfonamides are potent drugs, and may cause toxic reactions. Sulfonamides, therefore, should be given only under constant supervision of a Physician.

TRI-AZO-TAB

Each tablet represents:

Sulfadiazine 0.166 gm. (2.57 gr.)

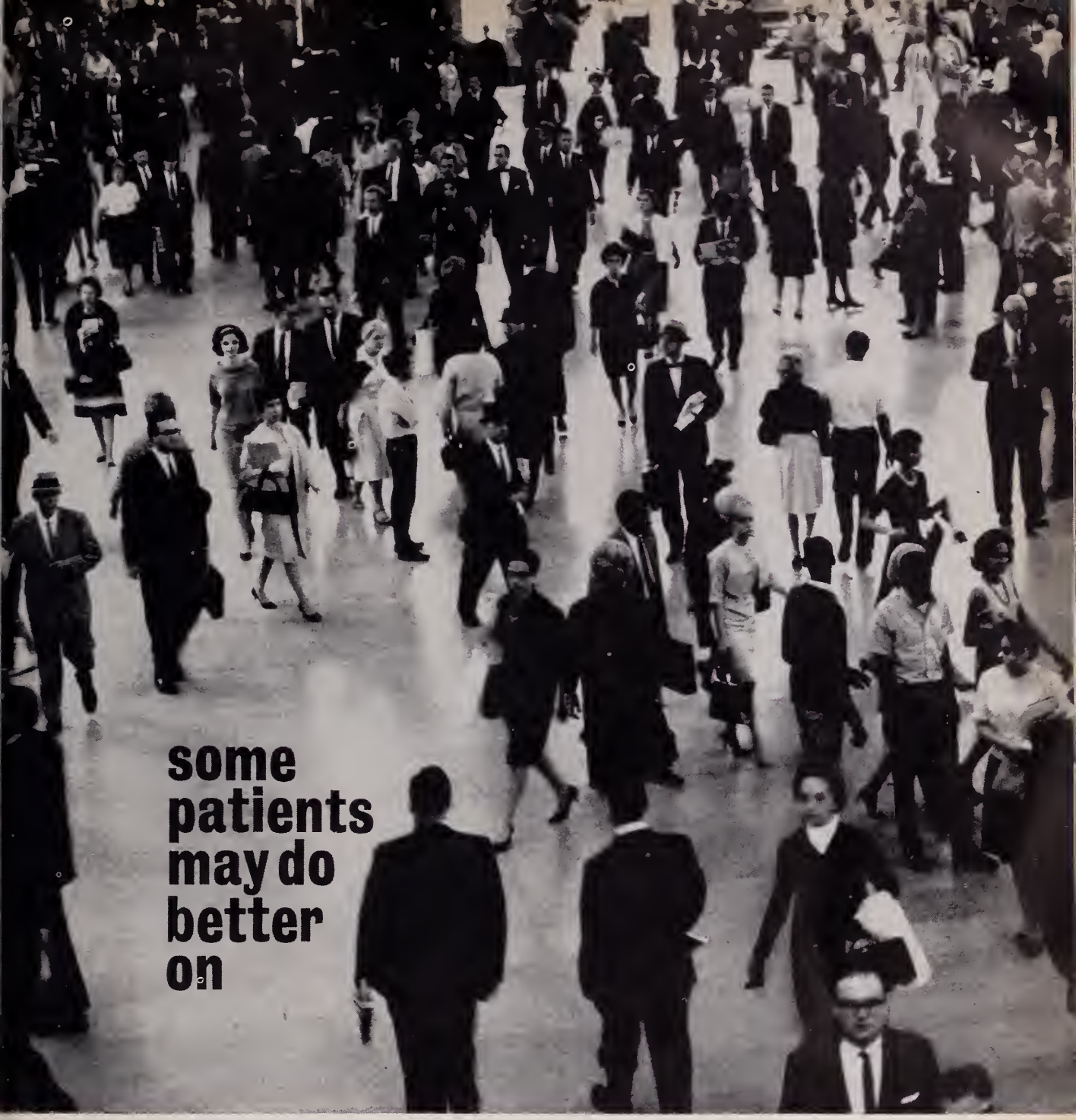
Sulfamerazine ..0.166 gm. (2.57 gr.)

Sulfamethazine .0.166 gm. (2.57 gr.)

Available in White or Pink colored tablets in bottles of 100, 500 or 1,000.

TRI-AZO-MUL (citrated) offers the same formula as TRI-AZO-MUL (plain) with sodium citrate (17.5 gm.).

First Texas
Pharmaceuticals, Inc.
DALLAS • ATLANTA • SINCE 1901



ACHROCIDIN®

TETRACYCLINE HCl-ANTIHISTAMINE-ANALGESIC COMPOUND

Each Tablet contains:

ACHROMYCIN® Tetracycline HCl ..	125 mg.	Caffeine	30 mg.
Acetophenetidin (Phenacetin)	120 mg.	Salicylamide	150 mg.
		Chlorothen Citrate	25 mg.

Effective in controlling tetracycline-sensitive bacterial infection and providing symptomatic relief in allergic diseases of the upper respiratory tract. Possible side effects are drowsiness, slight gastric distress, overgrowth of nonsusceptible organisms, tooth discoloration. The last named may occur only if the drug is given during tooth formation (late pregnancy, the neonatal period, early childhood). Average Adult Dosage: 2 Tablets four times daily.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

7142-3

Browne-McHardy Clinics

MAIN CLINIC
3636 St. Charles Ave.
New Orleans 15, La.
TWinbrook 9-2376

GRAVIER ST. DIVISION
630 Gravier St.
New Orleans 12, La.
524-1605

VETERANS HIGHWAY DIVISION
8601 Veterans Memorial Hwy.
Metairie, La.
VErnon 3-7341

INTERNAL MEDICINE
Cardiology
Endocrinology
Gastroenterology
Hematology
Rheumatology

Donovan C. Browne, M. D.
Wiley H. Jenkins, M. D.
Robert C. Judice, M. D.
John T. Leckert, M. D.
G. Gordon McHardy, M. D.
Robert J. McHardy, M. D.
Swan S. Ward, M. D.
George E. Welch, M. D.
Guy T. Williams, M. D.
Manuel Paez, M. D.

DERMATOLOGY
William Eggerton, M. D.

DISEASES OF THE CHEST
Joseph E. Blum, Jr., M. D.

EAR, NOSE and THROAT
Norma Kearby, M. D.

GENERAL SURGERY
Claude C. Craighead, M. D.
Raul G. Reyes, M. D.

OBSTETRICS and GYNECOLOGY
C. Gordon Johnson, M. D.
Robert I. Ayerst, M. D.
James M. Todd, Jr., M. D.

OPHTHALMOLOGY
Oliver H. Dabezies, M. D.

INDUSTRIAL MEDICINE
Ralph J. McDonough, M. D.

PEDIATRICS
Carl E. Kemmerly, M. D.
Milton H. Donaldson, M. D.

RADIOLOGY and RADIOTHERAPY
Charles O'Dowd Lilly, M. D.
Joseph B. Marino, M. D.
Walter McDowell, M. D.

UROLOGY
John F. Lally, M. D.
George Cuellar, M. D.

AUXILIARY SERVICES
Cytology
Diabetics
Electroencephalograph
Endoscopy
Medical Laboratory
Pharmacy
Physical Therapy
Pulmonary Function Studies

from CURITY

A big aseptic advance in a tiny new package

The New WEBCOL Alcohol Preps

Sterile—ethylene oxide kills alcohol resistant spores.

Convenient—ready for instant use.

Economical—no waste from evaporation, no dripping from excess saturation.

PEACOCK
SURGICAL COMPANY INC.

1235 TEXAS AVENUE
SHREVEPORT, LOUISIANA



In Sprains, Strains and Muscle Spasm, 'Soma' Compound

numbs the pain...not the patient

A potent analgesic and a superior muscle relaxant

1. A sprain or fracture is not a big clinical problem—but it does hurt. And if there is housework to do and kids to mind, the patient needs something to numb the pain.

2. A.P.C. compounds have limited usefulness; and the patient can buy them without your prescription. Unfortunately, most of them are too mild to be effective for sprains—and more potent products too often make the patient feel 'dopey'.

3. 'Soma' Compound is ideal in these cases. Since it contains both 'Soma' (carisoprodol) and acetophenetidin it is both a potent analgesic and a superior muscle relaxant; it also contains caffeine to offset any drowsiness *("numbs the pain...not the patient")*.

4. Why not try 'Soma' Compound? Dosage is 1 or 2 tablets q.i.d. For more severe pain, try 'Soma' Compound + Codeine. Dosage: 1 or 2 tablets q.i.d.

5. Hypersensitivity to carisoprodol may occur rarely. Codeine may produce addiction, nausea, vomiting, constipation or miosis.

Soma® Compound

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg.

Soma® Compound + Codeine

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg., codeine phosphate 16 mg. (Warning—may be habit forming.)

®WALLACE LABORATORIES / *Cranbury, N.J.*

CSO-9193

Colds haven't changed— but relief has with NTz® NASAL SPRAY

NTz Nasal Spray gives on-the-spot relief for stopped-up noses instantly. Recommended by doctors for 10 years, it provides not one, but three powerful ways to fast relief.

In a carefully balanced formula, NTz contains:

Neo-Synephrine® HCl to shrink swollen nasal tissues and provide enough space for breathing

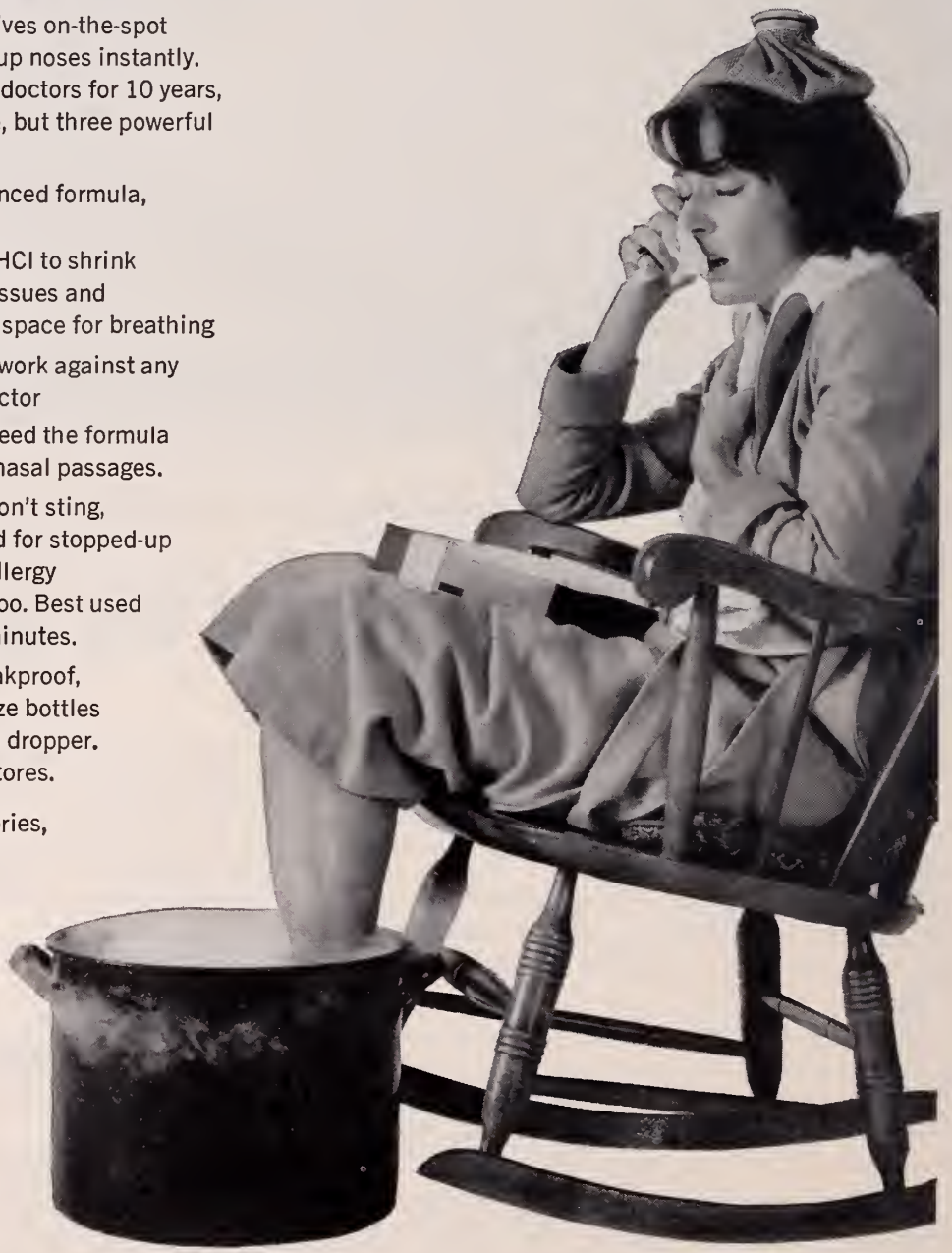
Thenfadil® HCl to work against any local allergic factor

Zephiran® Cl to speed the formula through **all** the nasal passages.

NTz Nasal Spray won't sting, won't irritate. Good for stopped-up noses caused by allergy and for sinusitis, too. Best used **twice** within five minutes.

NTz supplied in leakproof, pocket-size squeeze bottles and in bottles with dropper. Sold only in drugstores.

Winthrop Laboratories,
New York 18, N. Y.



Winthrop

NTz, Neo-Synephrine (brand of phenylephrine), Thenfadil (brand of thenyldiamine) and Zephiran (brand of benzalkonium, as chloride, refined), trademarks reg. U. S. Pat. Off.

Important news in cardiac therapy

Two new clinical reports document successful long-term treatment of ischemic heart disease with Persantin®, brand of dipyridamole

See next 3 pages

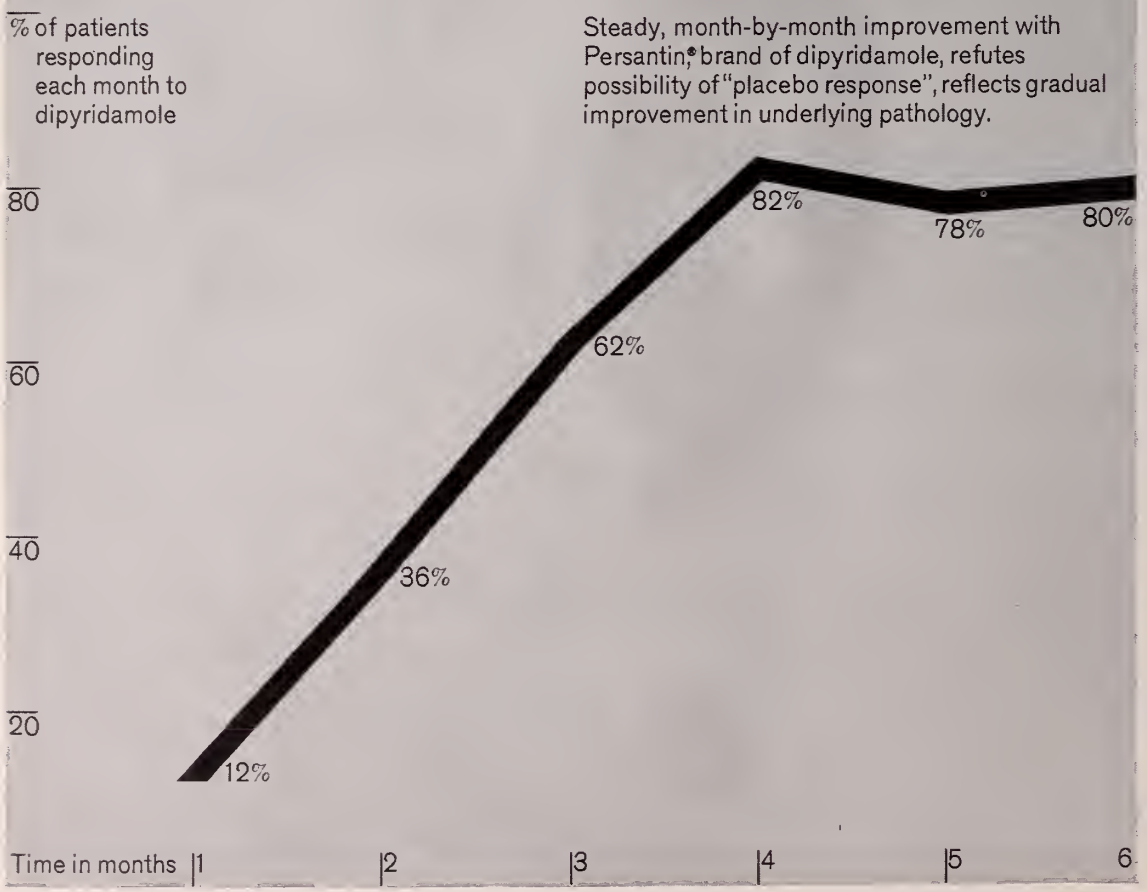
Study 1.
Griep,A.H.: Long-term Therapy of Ischemic Heart Disease With Oral Dipyridamole: A Report of Fifty Cases. Angiology 14:484, 1963.

Persantin,® brand of dipyridamole, 25 mg. t.i.d. or q.i.d.,was administered continuously for 6 months to 50 patients with well authenticated ischemic heart disease with angina pectoris and ECG abnormalities. Results were evaluated on a monthly basis.

Persantin® brand of dipyridamole

"...long-term oral therapy with dipyridamole was of benefit in 80 per cent of the patients...

"relief [of angina] came slowly and was usually maximal after three to six months of continuous treatment"



Study 2.
Wirecki,M.: Dipyridamole (Persantin®): Evaluation of Long-Term Therapy in Angina Pectoris. Current Therapeutic Research 5:472, 1963.

In 40 ambulatory patients with myocardial ischemia, angina pectoris, and abnormal ECG findings, Persantin,® brand of dipyridamole, 25 mg. t.i.d., was administered continuously for 3 months.

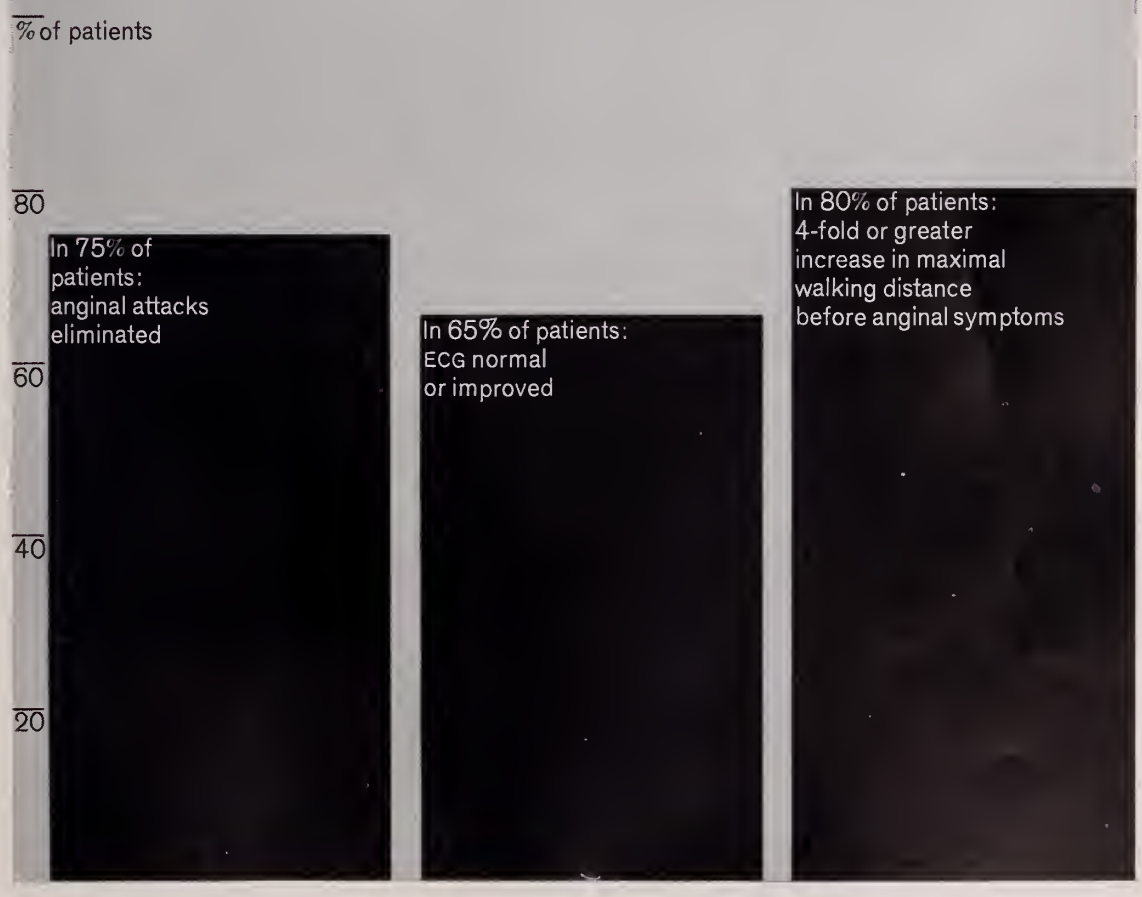
Geigy

After 3 months, 32 of 40 patients showed:

"...reduction or abolition of acute anginal attacks...

"complete or almost complete disappearance of ECG abnormalities...

"marked increase" in walking distance without anginal symptoms



Persantin® brand of dipyridamole

How long-term therapy provides clinical benefits reported on previous pages

1. By increasing energy yield
of the hypoxic myocardial cell, by direct action upon the sarcosomes (heart mitochondria).[1-5]

2. By improving collateral coronary circulation.
Prolonged oral administration of dipyridamole to animals with experimentally induced stenosis of a major coronary artery resulted in superior development of collateral coronary anastomoses and longer survival compared with controls.[6-9]

When given for prolonged periods and in adequate dosage, dipyridamole improves the coronary flow deficit of the ischemic myocardium while supporting cardiac metabolism during the period of repair. Clinically, this is manifested as steady improvement – anginal attacks diminish in frequency and intensity, as do other manifestations of insufficiency (dyspnea, fatigue, and, in many instances, abnormal electrocardiographic findings).

Availability:
Tablets of 25 mg., bottles of 100 and 1000.
Under license from Boehringer Ingelheim G.m.b.H.

Prescribing summary: Persantin,® brand of dipyridamole, is indicated in coronary and myocardial insufficiency, in a dosage of 2 to 6 tablets daily in divided doses before meals for several weeks. Side effects (headache, dizziness, nausea, flushing, weakness, syncope, mild gastrointestinal distress) are minimal and transient. The drug is not recommended in the acute phase of myocardial infarction, and should be used cautiously in hypotension.

References: 1.Kunz,W.;Schmid,W.,and Siess,M.: Arzneimittel-Forsch.12:1098,1962. 2.Siess,M.: Arzneimittel-Forsch.12:683,1962. 3.Laudahn,G.: Experientia 17:415,1961. 4.Lamprecht,W.: 27th Congress of the German Society for Circulation Research,Bad Nauheim,1961. 5.Hockerts,T.,and Bögelmann,G.: Arzneimittel-Forsch.9:47,1959. 6.Vineberg,A.M.,et al.: Canad.M.A.J.87:336,1962. 7.Chari,S.R.,et al.: Presented at the International Congress of Chest Physicians,New Delhi,1963. 8.Neuhaus,G.,et al.: Presented at the Fourth World Congress of Cardiology,Mexico City,1962. 9.Asada, S.,et al.: Japanese Circ.J.26:849,1962.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York, Distributors

PE-2290



Smooths out emotional peaks and valleys

'Meprospan'-400 brand of meprobamate contains 400 mg. in sustained-release form. One capsule smooths out the anxious patient's emotional peaks and valleys for 10 to 12 hours — and provides these other advantages:

1. **Especially suitable for maintenance therapy.** Patients whose anxiety has diminished to a mild or moderate level still require a certain amount of tranquilization throughout the day. Sustained-release action is ideally suited to this type of patient.
2. **Simpler dosage schedule.** Since one capsule of 'Meprospan'-400 (meprobamate, sustained release) acts 10 to 12 hours, the patient enjoys a much simpler dosage schedule than with tablets — and is less likely to forget to take the medicine.

Side Effects: Rarely, skin reactions. May increase effects of excessive alcohol. Use with care in patients with suicidal tendencies. Massive overdosage may produce coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence in patients with history of drug or alcohol addiction.

Available: *'Meprospan'-400* (meprobamate, sustained release) contains meprobamate 400 mg. *'Meprospan'-200* (meprobamate, sustained release) contains meprobamate 200 mg. Both potencies in bottles of 30. **Usual dosage:** One 400 mg. capsule or two 200 mg. capsules at breakfast; repeat with evening meal.

Meprospan®-400
meprobamate 400 mg.
sustained release

WALLACE LABORATORIES / *Cranbury, N.J.*

CME-9188



STARTING TOMORROW MORNING 

this capsule can help one of your overweight patients do without her favorite (fattening) foods at meals—and during all the hours in between.

Dexamyl® Spansule®
Trademark brand of sustained release capsules

Each No. 2 capsule contains 15 mg. of Dexedrine® (brand of dextro amphetamine sulfate) and 1½ gr. of amobarbital, derivative of barbituric acid [Warning, may be habit forming]. Each No. 1 capsule contains 10 mg. of Dexedrine (brand of dextro amphetamine sulfate) and 1 gr. of amobarbital [Warning, may be habit forming].

The active ingredients of the 'Spansule' capsule are so prepared that a therapeutic dose is released promptly and the remaining medication, released gradually and without interruption, sustains the effect for 10 to 12 hours.

INDICATIONS: (1) For control of appetite in overweight; (2) for mood elevation in depressive states.

USUAL DOSAGE: One 'Dexamyl' *Spansule* capsule taken in the morning.

SIDE EFFECTS: Insomnia, excitability and increased motor activity are infrequent and ordinarily mild.

CAUTIONS: Use with caution in patients hypersensitive to sympathomimetics or barbiturates and in coronary or cardiovascular disease or severe hypertension. Excessive use of the amphetamines by unstable individuals may result in a psychological dependence; in these rare instances withdrawal of medication is recommended. It is generally recognized that in pregnant patients all medications should be used cautiously, especially in the first trimester.

SUPPLIED: Bottles of 50 capsules.

Smith Kline & French Laboratories SK&F *Prescribing information Jan. 1963*

cut Rx writing by 2/3 in colds, flu or grippe

NAME _____

ADDRESS _____

℞

No need to write three separate prescriptions for antitussive, decongestant and analgesic relief of common cold, flu or grippe symptoms when it is therapeutically correct... economically sound... to specify

ANTITUSSIVE/DECONGESTANT/ANALGESIC
'EMPRAZIL-C'® TABLETS

Each tablet contains:

Codeine Phosphate*	15 mg.
'Sudafed'® brand Pseudoephedrine Hydrochloride	20 mg.
'Perazil'® brand Chlorcyclizine Hydrochloride	15 mg.
Phenacetin	150 mg.
Aspirin	200 mg.
Caffeine	30 mg.

*Warning—may be habit forming

'Emprazil-C' Tablets are available on prescription only.

Dosage: Adults and children over 12 years—1 or 2 tablets—3 times daily as required. Children 6 to 12 years—1 tablet—3 times daily as required. **Caution:** While pseudoephedrine is virtually without pressor effect in normotensive patients, it should be used with caution in hypertension. Also, while chlorcyclizine has a low incidence of antihistaminic drowsiness, the usual precautions should be observed. **Supplied:** Bottles of 100 tablets.

Also available without codeine as 'EMPRAZIL'® TABLETS

Complete literature available on request from Professional Services Dept. PML.



BURROUGHS WELLCOME & CO (U.S.A.) INC.

Tuckahoe, N. Y.

ANNUAL CLINICAL CONFERENCE

CHICAGO MEDICAL SOCIETY

March 2, 3, 4 and 5, 1964

Palmer House, Chicago

Lectures

Teaching Demonstrations

Medical Color Telecasts

Film Lectures

Instructional Courses

The CHICAGO MEDICAL SOCIETY ANNUAL CLINICAL CONFERENCE should be a MUST on the calendar of every physician. Plan now to attend and make your reservation at the Palmer House.

At home or traveling . . .
effective management of
• AMEBIC DYSENTERY
• SIMPLE DIARRHEA

YODOXIN®
DIIODOHYDROXYQUIN U.S.P.



. . . THE DRUG OF CHOICE IN AMEBIC DYSENTERY
. . . FOUND EFFECTIVE IN THE MANAGEMENT OF NONSPECIFIC DIARRHEA
. . . LOW TOXICITY OF THIS DRUG COMPARED TO OTHER AMEBACIDES GIVES OUTSTANDING ADVANTAGES IN THESE ENTITIES

SUGGESTED DOSAGE:

AMEBIC DYSENTERY: Adults take 3 tablets t.i.d. after meals. This is continued for 20 days.

NONSPECIFIC ENTERITIS AND SIMPLE DIARRHEA: At first discomfort one tablet, another tablet two hours later. Repeat next day if diarrhea persists.

Chills, fever, rash, erythema and in rare cases furunculosis have been reported. Iodine containing compounds are contraindicated in patients with liver damage or known drug sensitivity.

For adequate use data please request and consult our product literature

GLENWOOD LABORATORIES, Inc., TENAFLY, N. J.

blood, milk and Maalox®

(magnesium-aluminum hydroxide gel)

Practically standard treatment, now, for bleeding ulcer. Why is Maalox included? Antacid therapy *must* continue long after the wound has healed, and patients started on Maalox tend to stay on Maalox. It tastes good; it's effective and will not cause constipation—three important reasons for Maalox over the long haul. Some physicians, we are told, order Maalox routinely for hospital patients on drugs which could irritate. They feel it reduces the likelihood of gastric discomfort. Supplied: Suspension; Tablets No. 1; Tablets No. 2. (Each Maalox No. 1 Tablet is equivalent to 1 teaspoonful and each Maalox No. 2 Tablet is equivalent to 2 teaspoonfuls of Suspension.)



ROHER

WILLIAM H. RORER, INC., FORT WASHINGTON, PA.

The one tranquilizer that

BELONGS IN EVERY PRACTICE

it's versatile: The years have proved that 'Miltown' (meprobamate) is the one tranquilizer that is helpful in almost every aspect of daily practice. Virtually any of your patients, regardless of age, can be given the drug with confidence, either as a primary treatment or as an adjunct to other therapy.

Outstanding record of safety: Over eight years of clinical use among millions of patients throughout the world — plus more than 1500 published reports covering the use of the drug in almost every field of medicine — support your prescriptions for 'Miltown' (meprobamate). This is why it *"belongs in every practice."*

dependable: 'Miltown' (meprobamate) is an established drug. There are no surprises in store for you or your patient. You can depend on it to help your patients through periods of emotional distress — and to help maintain their emotional stability.

easy to use: Because 'Miltown' (meprobamate) is compatible with almost any other kind of drug therapy, you'll find it fits in easily with any program of treatment you are now using. It will not, therefore, complicate treatment of patients seen in clinical practice.

BRIEF SUMMARY: *Indications:* Anxiety and tension states, and all conditions in which anxiety and tension are symptoms. *Side Effects:* Slight drowsiness may occur and, rarely, allergic or idiosyncratic reactions, generally developing after 1-4 doses of the drug. *Contraindications:* Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use. *Precautions:* Should administration of meprobamate cause drowsiness or visual disturbances, the dose should be reduced. Operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Prescribe cautiously and in small quantities, to patients with suicidal tendencies. Massive overdosage may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after prolonged use at high dosage. *Complete product information available to physicians on request.*

USUAL ADULT DOSAGE: 1 or 2 400 mg. tablets t.i.d.

SUPPLIED: 400 mg. scored tablets, 200 mg. coated tablets.

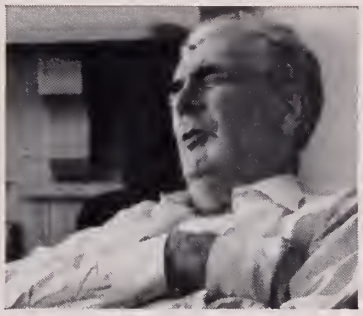
CM-0604



The insomniac



The tense, nervous patient



The heart-disease patient



The surgical patient



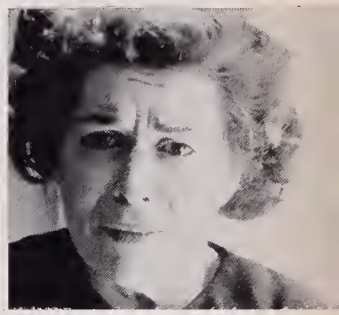
The girl with dermatosis



Tension headache



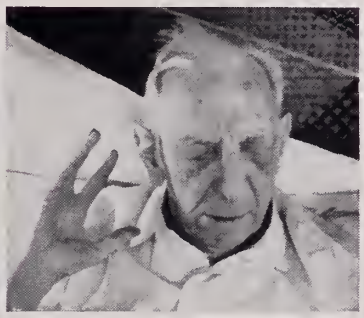
The woman in menopause



Anxious depression



Premenstrual tension



The agitated senile patient



The alcoholic



The problem child

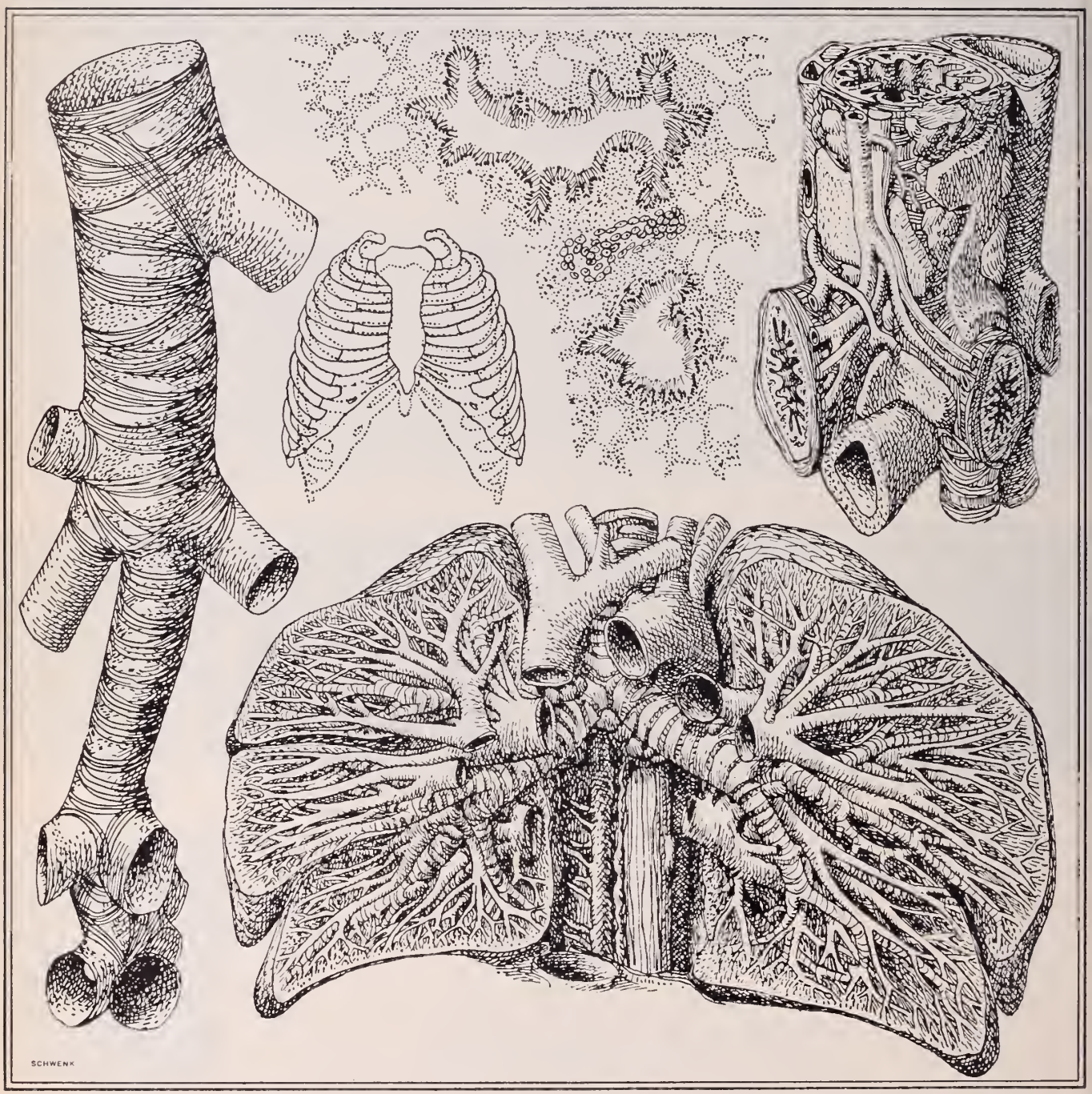
the original brand of
meprobamate

Miltown®



The G.I. patient

WALLACE LABORATORIES
Cranbury, N.J.


SCHWENK

Air Rights

With ARISTOCORT Triamcinolone, many asthmatic patients obtain early gratifying relief of wheezing, dyspnea and spasmodic coughing. And maintenance dosage in many cases can be surprisingly low—*often as little as a single 2 mg. tablet per day.* Yet it provides this symptomatic control—which may enable many patients to continue their customary livelihoods or regular household activities—with only minimal interference with other metabolic functions. In this respect, ARISTOCORT Triamcinolone is distinguished compared with other corticosteroids, old and new. Typical steroid problems of sodium retention and edema, euphoria, or voracious appetite and excessive weight gain rarely occur.

ARISTOCORT Triamcinolone is indicated when anti-inflammatory, anti-allergic action of glucocorticoids is desired. SIDE EFFECTS of glucocorticoids generally: Cushingoid effects, hirsutism, leucopenia, purpura, vertigo, fatigue, increased hyperglycemia, osteoporosis, gastrointestinal hemorrhage, cataracts, growth suppression in children and increased intracranial pressure. Other glucocorticoid effects thought more likely to occur with triamcinolone: reversible weakness of muscles and flushing of face.

PRECAUTIONS: ARISTOCORT Triamcinolone should be used with extreme caution in viral infection, particularly herpes simplex and chicken pox, in tubercular or fungal infection, in active peptic ulcer, acute glomerular nephritis or myasthenia gravis.

FORMULA—Tablets (scored) containing 1 mg., 2 mg. or 4 mg. of triamcinolone. Syrup—2 mg. of triamcinolone diacetate per 5 cc. (5 mg. of triamcinolone diacetate is equivalent to 4 mg. of triamcinolone).

Aristocort®
Triamcinolone

Maximum steroid benefits with minimum steroid penalty

Lederle LEDERLE LABORATORIES • A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York
162-R3 (DC31-S)

reduce or obviate the need for transfusions and their attendant dangers

KOAGAMIN is indicated whenever capillary or venous bleeding presents a problem.

KOAGAMIN has an outstanding safety record -- in 25 years of use no report of an untoward reaction has been received; however, it should be used with care on patients with a predisposition to thrombosis.



KOAGAMIN®

parenteral hemostat

Each cc contains: 5 mg. oxalic acid, 2.5 mg. malonic acid, phenol 0.25%; sodium carbonate as buffer.

Complete data with each 10cc vial. Therapy chart on request.

CHATHAM PHARMACEUTICALS, INC.
Newark 2, New Jersey
Distributed in Canada by Austin Laboratories, Ltd. • Paris, Ontario



Protects your angina patient better than vasodilators alone

'Miltrate' contains both pentaerythritol tetranitrate, which dilates the patient's coronary arteries, and meprobamate, which relieves his anxiety about his condition. Thus 'Miltrate' protects your angina patient better than vasodilators alone.

Pentaerythritol tetranitrate may infrequently cause nausea and mild headache, usually transient. Slight drowsiness may occur with meprobamate and, rarely, allergic reactions. Meprobamate may increase effects of excessive alcohol. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Like all nitrate-containing drugs, 'Miltrate' should be given with caution in glaucoma.

Dosage: 1 or 2 tablets *before meals* and at bedtime. Individualization required.
Supplied: Bottles of 50 tablets.

CML-9646

Miltrate®

meprobamate 200 mg.+ pentaerythritol tetranitrate 10 mg.

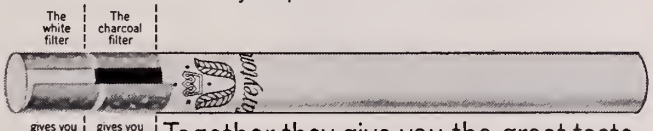
WALLACE LABORATORIES / *Cranbury, N. J.*

"Us Tareyton smokers would rather fight than switch!"



Join the Unswitchables and enjoy the great taste that inspires their aggressive loyalty.

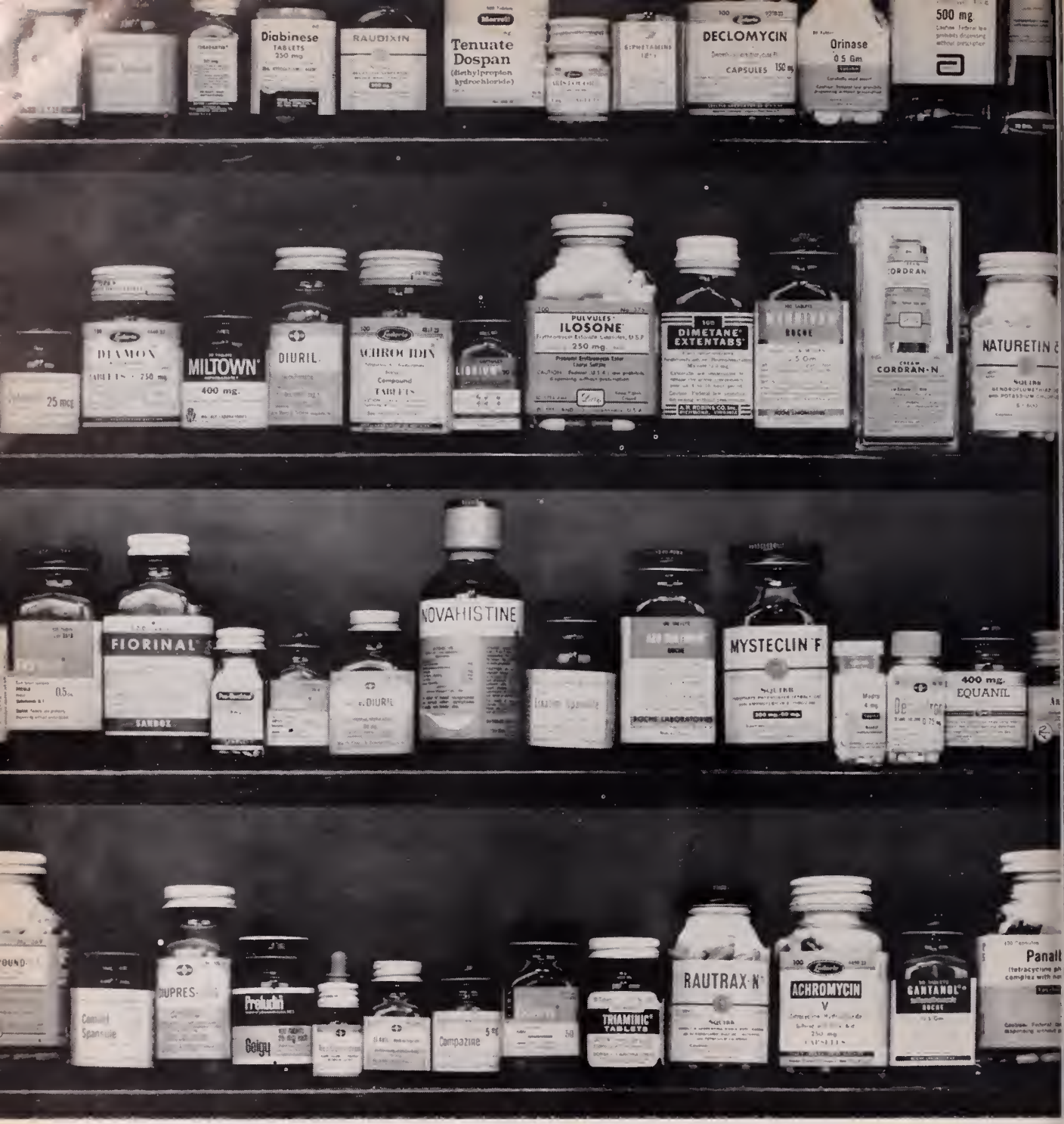
Tareyton, of course, is famous for fine tobacco. Now see how the Activated Charcoal filter works with the white filter to actually improve the fine tobacco taste:



Together they give you the great taste of **DUAL FILTER TAREYTON**



Product of The American Tobacco Company — "Tobacco is our middle name" © A. T. Co.



we couldn't begin to get them all into the picture...

Much has been said and more has been written about the quality of, and the motives behind, independent drug research in this country. So we decided to take a look at what we, as an industry, have done in terms of medical progress over the years.

We made a list of the most frequently prescribed drugs of 1962. We gathered them together to take the picture you see on this page. Then we eliminated all products introduced more than 10 years ago. *But then, for the camera to make the labels legible, it became necessary to eliminate several more.*

Just 10 years ago none of these drugs were available for your prescription. How much would it affect your practice if none were available today?

This message is brought to you on behalf of the producers of prescription products.

PHARMACEUTICAL MANUFACTURERS ASSOC. • 1411 K STREET, N.W. • WASHINGTON, D.C.

HOW TO WIN FRIENDS...

little



New
Orange Flavored
Bayer Aspirin for Children
is sweet
all the way through,
so children
take it readily.
The GRIP-TIGHT CAP
on the bottle
helps keep them
from taking it
on their own.

Bottles of 50 tablets
(1¼ grains each)

NOW!
NEW ORANGE FLAVOR!

We will be pleased to send
professional samples on request.

THE BAYER COMPANY
Division of Sterling Drug Inc. Dept. 112
1450 Broadway, New York 18, N.Y.



What every bride should know about U.S. Savings Bonds

Mother may have forgotten to mention it, but there are some important things you should know about U.S. Savings Bonds when you get married.

1. Your Savings Bonds should be reissued in your married name. They'll continue to earn interest as they are, but reissuing them now will help avoid problems when you want to cash them in some day.

2. If you want to be named co-owner or beneficiary on your husband's Bonds, these should be reissued, too.

Your bank will help you with this, no charge.

Of course, now that you have so much to save for, you'll want to keep on buying U.S. Savings Bonds. As well as providing money for many of the things you'll need, they help protect your freedom to live happily ever after.



Value at maturity—$50. Cost—$37.50.

Help yourself while you help your country

BUY U.S. SAVINGS BONDS

This advertising is donated by The Advertising Council and this magazine.



PSYCHIATRIC HOSPITAL

DAY HOSPITAL

DEPARTMENT OF OUT PATIENT PSYCHIATRY

TIMBERLAWN FOUNDATION
For Education and Research in Psychiatry

Narcotic Cases Not Admitted

TIMBERLAWN
PSYCHIATRIC CENTER

PERRY C. TALKINGTON, M.D.
Psychiatrist In Chief

CHARLES L. BLOSS, M.D.
Medical Director

HOWARD M. BURKETT, M.D.
Clinical Director

DONALD BERTOCH, M.A.
DAVID LIPSHER, Ph.D.
JEAN HUBBARD, B.S.
Clinical Psychology

Associate Psychiatrists
JAMES K. PEDEN, M.D.
WARD G. DIXON, M.D.
JERRY M. LEWIS, M.D.
CLAUDE L. JACKSON, M.D.
E. CLAY GRIFFITH, M.D.
BELVIN A. SIMMONS, M.D.
ALBERT F. RIEDEL, M.D.
JOHN HENRY REITMAN, M.D.

Business Manager
RALPH M. BARNETTE, JR., B.B.A.

BILL M. TURNAGE, M.S.S.W.
ROBERT L. COATES, M.S.S.W.
WELDON EBELING, M.S.S.W.
Social Work

GERALDINE SKINNER, B.S., O.T.R.
Director of Occupational Therapy

LOIS TIMMINS, Ed.D.
Director of Recreational Therapy

FRANCES LUMPKIN, R.N., B.S.
Director of Nurses

EVergreen 1-2121 — Dallas 21, Texas — P. O. Box 1769

One out of three *who died of cancer*
last year ***could have been saved!***

To alert the practicing physician to suspect and diagnose cancer early—the American Cancer Society has available for you a film series of Physicians' Conferences on Cancer.

*Kinescopes of live, color, closed-circuit television programs, on early diagnosis and treatment of cancer, present outstanding clinicians.

These 24 film programs—the nucleus of a course on cancer for the General Practitioner—cover virtually all cancer sites and types. They center around panel discussions, laboratory techniques, case histories, x-ray findings, histopathology, statistical data, and operative procedures.

Professional Films and services available to the doctor in his own community may be obtained through your Division of the

American Cancer Society

* APPROVED BY THE AMERICAN ACADEMY OF GENERAL PRACTICE FOR INFORMAL STUDY CREDIT (16 MM COLOR SOUND FILMS. RUNNING TIME 30-50 MINUTES)

AMERICAN CANCER SOCIETY, Louisiana Division, Inc., 822 Perdido Street, New Orleans 12, La.

Digitalis

in its completeness



Each pill is
equivalent to
one USP Digitalis Unit

Physiologically Standardized
therefore always
dependable.

Clinical samples sent to physicians upon request.

Davies, Rose & Co., Ltd.
Boston, 18, Mass.

INDEX TO ADVERTISERS

American College of Cardiology 1
American Tobacco Company, The 39
Ames Company, Inc. 16

Browne-McHardy Clinics 22
Burroughs Wellcome & Co. 12, 31

Chatham Pharmaceuticals, Inc. 38
Chicago Medical Society 32

Davies, Rose & Co., Ltd. 44

Endo Laboratories 17

First Texas Pharmaceuticals, Inc. 20

Geigy Pharmaceuticals 25, 26, 27, 28
Glenbrook Laboratories 41
Glenwood Laboratories, Inc. 32

Katz & Besthoff, Ltd. 1

Lederle Laboratories 5, 15, 21, 36, 37
Lilly & Company, Eli Front Cover, 18
Louisiana Coca-Cola Bottling Co. 1
Louisiana State Board of
Health Second & Third Covers
Lov-é Brassiere Company 13

Majors Company, J. A. 1

Parke, Davis & Company 6, 7
Peacock Surgical Co., Inc. 22
Pharmaceutical Manufacturers Assoc. 40
Professional Cards 45, 46
Professional Management Service 10

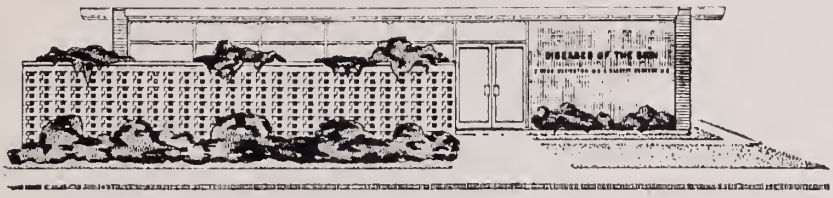
Robins Co., Inc., A. H. 3, 4
Roche Laboratories Back Cover
Rorer, Inc., William H. 33

Searle & Company, G. D. 19
Smith Kline & French Laboratories 30

Timberlawn Psychiatric Center 43

Wallace Laboratories 8, 9, 14, 23, 29, 34, 35, 38
Winthrop Laboratories 2, 11, 24

PROFESSIONAL CARDS



Courtesy Parking

Adjacent to Building

BARRETT KENNEDY, M. D.

V. MEDD HENINGTON, M. D.

WM. J. PERRET, M. D.
(Associate)

DERMATOLOGY

4522 MAGNOLIA STREET

TWinbrook 1-4452 — 1-4453

Green Clinic

709 South Vienna Street — Ruston, Louisiana

Surgery
Marvin T. Green, M.D.
LaMoyne C. Bleich, M.D.

Obstetrics and Gynecology
Carl L. Langford, M.D.
David M. Hall, M.D.

Pediatrics
Bruce W. Everist, M.D.
O. Wharton Brown, Jr., M.D.

Eye, Ear, Nose and Throat
Harold H. Harms, M.D.

Radiology
M. Ragan Green, M. D.

Internal Medicine
Henry S. Roane, M.D.
Robert W. Sharp, M.D.
Joe L. Smith, Jr., M.D.

Dentistry
L. Felton Green, D.D.S.
Benjamin C. Baugh, D.D.

The Baton Rouge Clinic

134 North 19th St. — DI 8-5361

SURGERY
Joseph Sabatier, M. D.
Charles Mosely, M. D.
Charles S. Peter, M. D.

GYNECOLOGY & OBSTETRICS
Melvin Schudmak, M. D.
J. P. Griffon, M. D.
Donald C. Diefendorf, M. D.

UROLOGY
Mortimer Silvey, M. D.
Alfred M. Holden, M. D.

CONSULTANT RADIOLOGISTS
David S. Malen, M. D.
Allie Woolfolk, M. D.

INTERNAL MEDICINE
Charles S. Prosser, M. D.
Roger Reynolds, M. D.
(Allergy)
Bruce L. Baer, M. D.
(Gastroenterology)
Douglas Gordon, M. D.
(Endocrinology)
David D. Kahn, M. D.
(Hematology)

OPHTHALMOLOGY
George H. Jones, M. D.

PHILIP RONALD LORIA, M. D.

DISEASES OF THE SKIN

Dermoplaning — **Removal of Excessive Hair**

1104 Maison Blanche Bldg. — New Orleans 16, La.
By Appointment — 524-9621

PROFESSIONAL CARDS

JOHN C. HARDIN, JR.
D.D.S., M.D., F.A.C.S.
Maxillo-Facial & Oral Surgery
(Head and Neck Surgery)
121 Physicians & Surgeons Bldg., West
Phone 423-6901 Shreveport, Louisiana

BLAISE SALATICH, D.D.S., M.D.
PRACTICE LIMITED TO ORTHOPEDIC SURGERY
1212 Maison Blanche Building
JAckson 2-7697 By Appointment

DR. NATHAN H. POLMER
Physical Medicine—Rehabilitation
2209 Carondelet St.
2 - 5 P. M.
Off.: JA 2-0171 Res.: JA 2-3946

JAMES W. BURKS, JR., M. D.
DISEASES OF THE SKIN
SURGICAL PLANING FOR COSMETIC DEFECTS
FACILITIES FOR REMOVAL OF SUPERFLUOUS HAIR
925 Maison Blanche Bldg.
New Orleans 16, La. 529-3322

DR. R. ROSS, JR.
SKIN DISEASES
802 Pere Marquette Bldg. JA 2-0202

DR. RICHARD W. VINCENT
PLASTIC AND RECONSTRUCTIVE SURGERY
34 Maes Court — Medical Plaza
3600 PRYTANIA STREET
TWinbrook 5-4561

JUSTILLIEN H. FORET, M. D.
Practice Limited to Psychiatry
3706 Prytania Street
899-2618 By Appointment

CHARLES I. BLACK, M. D.
DISEASES OF THE SKIN
4550 North Boulevard 924-6256
Baton Rouge, Louisiana

Business Management Consultants
for Individual Practices, Groups and Clinics
PROFESSIONAL MANAGEMENT SERVICE
700 Maison Blanche Bldg.
524-1177 New Orleans 16, La.

HUGH MANY, M. D.
DISEASES OF THE SKIN
4900 St. Charles Avenue 895-6700
and
Nicholson-Baehr Clinic, Marrero, La.
By Appointment 341-1300

THE OWENS CLINIC
for
PLASTIC AND RECONSTRUCTIVE SURGERY
2223 Carondelet St. New Orleans 13, La.
Telephone: JAckson 2-0106
After Hours — Call Doctors' Exchange WH 5-4141

DR. HARTWIG M. ADLER
EYE, EAR, NOSE AND THROAT
Hours by appointment.
3439 Prytania Street TW. 1-4094
New Orleans

DR. CARL N. WAHL
Practice limited to
MAXILLO-FACIAL AND PLASTIC SURGERY
4500 Magnolia Street 891-6615

FRANK H. MAREK, M. D.
Radiologist
Medical Arts Bldg.
401 So. Ryan Street Lake Charles, La.
Phone HE 3-6361
Practice Limited to
X-ray and Radium Treatment and Diagnosis

LAFAYETTE SKIN
and
SKIN CANCER CLINIC
R. H. ROBINSON, M. D., Director
608 St. Landry St. Lafayette, La.
Telephone CE 5-2405

DR. HARRY ZOLLER
HEARING AND DEAFNESS
DISEASES AND SURGERY OF THE EAR
1109 Pere Marquette Building
JA. 5-2535 By Appointment

JOHN H. COUNCE, M. D.
Diseases of the Skin
1413 Delachaise St. New Orleans
Office Hours
By Appointment TW 1-2813

FREDERIC W. BREWER, M. D.
PRACTICE LIMITED TO PSYCHIATRY
1008 Maison Blanche Building
JA 5-4047 By Appointment

The Cancer Commission of the Louisiana State Medical Society



volunteer for all seasons

There is no season for cancer. And fighting it is a year-round job for the American Cancer Society volunteer.

Particularly for you, doctor, our *key* volunteer. Your thinking, experience and guidance are responsible for the formulation of our policies and programs; your knowledge and skill are essential to their execution. And so you serve on our National, Division and Unit boards. Act on our committees. Talk to lay audiences at our film showings. Help evaluate our research grants. Advise on our professional publications. Raise funds. Assess our program materials. The list goes on and on.

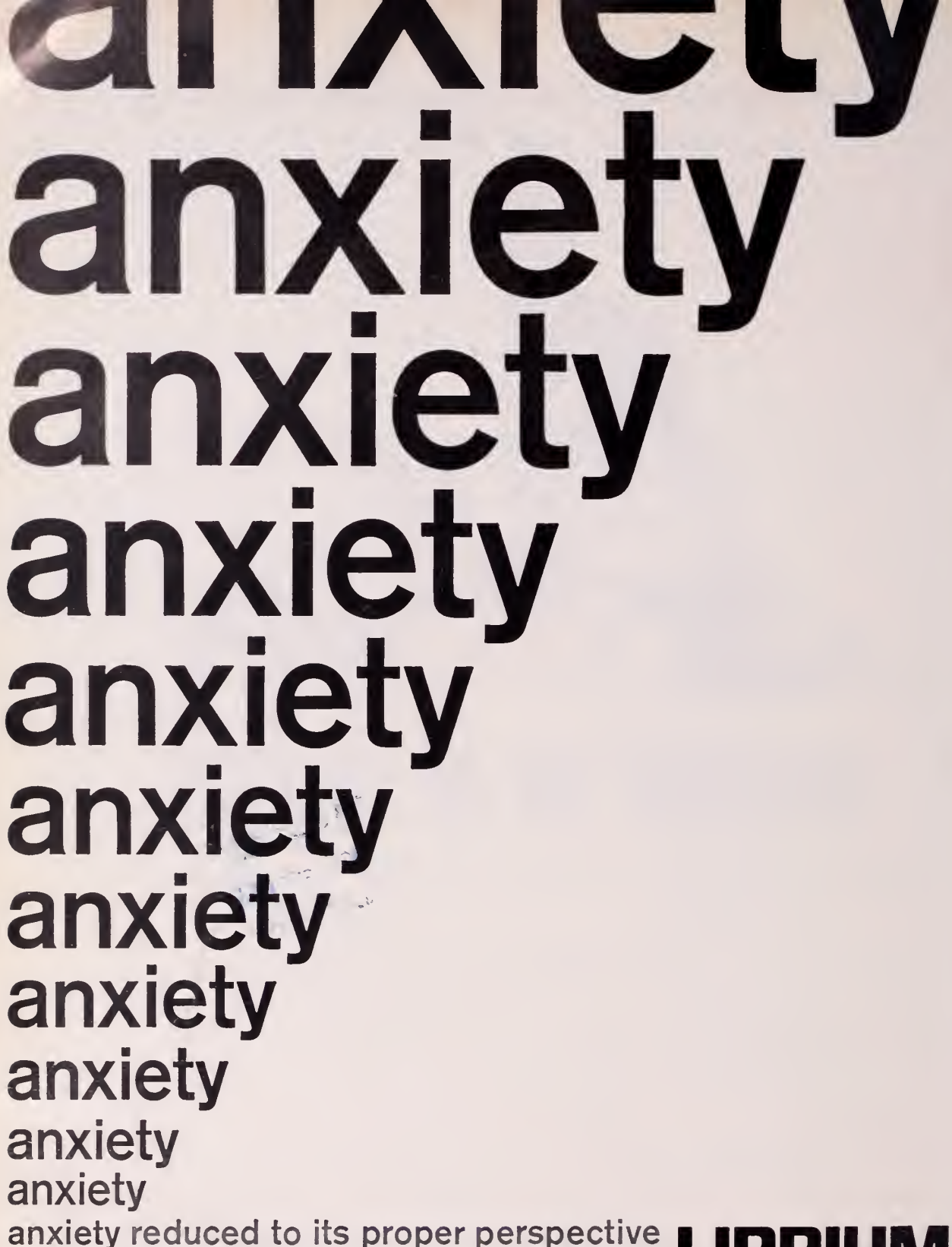
The American Cancer Society keeps you busy, doctor. We depend upon you. We hope that more and more of your fellow physicians will join you in working with us—all year, every year until the fight against cancer is won.

AMERICAN CANCER SOCIETY®

LOUISIANA DIVISION, INC.
204 Delta Building New Orleans 12, La.

Louisiana State Board of Health

JAMES R. STRAIN, M.D., M.P.H., *President*



LIBRIUM®
(chlordiazepoxide HCl)
the successor
to the tranquilizers

ROCHE

In prescribing: Dosage—Adults: Mild to moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d. Cautions—Occasional side effects, often dose-related, are drowsiness, ataxia, minor skin rashes, menstrual irregularities, nausea and constipation. Paradoxical reactions may occasionally occur in psychiatric patients. Individual maintenance dosages should be determined. Advise patients against possibly hazardous procedures until maintenance dosage is established. Though compatible with most drugs, use care in combining with other psychotropics, particularly MAO inhibitors or phenothiazines; warn patients of possible combined effects with alcohol. Observe usual precautions in impaired renal or hepatic function, and in long-term treatment. Caution should be exercised in prescribing any therapeutic agent for pregnant patients. Supplied—Capsules, 5 mg, 10 mg and 25 mg, bottles of 50 and 500.

NAL of the

LOUISIANA STATE MEDICAL SOCIETY

Formerly NEW ORLEANS MEDICAL and SURGICAL JOURNAL
OFFICIAL ORGAN OF THE LOUISIANA STATE MEDICAL SOCIETY

DECEMBER, 1963

Copyright 1963 by
iana State Medical Society.
per annum, 35¢ per copy

Vol. 115, No. 12

Published monthly by
The Journal of the Louisiana State
Medical Society, Inc.
1430 Tulane Ave., New Orleans 70112

Contents

Urology and Renal Physiology ... 401
J. U. Schlegel, M. D., New Orleans

Peritoneal Dialysis ... 406
Ike Muslow, M. D., Shreveport

Uric Acid Calculi ... 415
H. M. Yearwood, M. D., Shreveport

Clinical Value of Pulmonary Function Testing ... 418
Morton Solomon, M. D., New Orleans

Combined Atropine-Fluoropryl Treatment For Selected Children with Suppression Amblyopia ... 420
Joseph A. Baldone, M. D., Houma

Editorial ... 423

Organization Section ... 425

Medical News Section ... 427

Book Reviews ... 429

Index to Volume 115 ... 431

Index to Advertisers ... 34

INDEX NUMBER

LIBRARY
DEC
NEW YORK ACADEMY
OF MEDICINE



Announcing

The Twenty-Seventh Annual Meeting

of

THE NEW ORLEANS GRADUATE MEDICAL ASSEMBLY

Conference Headquarters — Roosevelt Hotel

March 2, 3, 4, 5, 1964

GUEST SPEAKERS

Nicholas M. Greene, M. D., New Haven, Conn.
Anesthesiology

Adolph Rostenberg, Jr., M. D., Chicago, Ill.
Dermatology

Arthur P. Klotz, M. D., Kansas City, Kans.
Gastroenterology

J. Roswell Gallagher, M. D., Boston, Mass.
General Practice

Roger B. Scott, M. D., Cleveland, Ohio
Gynecology

George R. Herrmann, M. D., Galveston, Tex.
Internal Medicine

William C. Thomas, Jr., M. D., Gainesville, Fla.
Internal Medicine

John B. Reckless, M. D., Durham, N. C.
Neuropsychiatry

Robert A. Cosgrove, M. D., Jersey City, N. J.
Obstetries

Roy O. Scholz, M. D., Baltimore, Md.
Ophthalmology

Otto E. Aufranc, M. D., Boston, Mass.
Orthopedic Surgery

Paul H. Holinger, M. D., Chicago, Ill.
Otolaryngology

Paul K. Lund, M. D., Seattle, Wash.
Pathology

Margaret Lyman, M. D., New York, N. Y.
Pediatrics

David S. Carroll, M. D., Memphis, Tenn.
Radiology

C. Barber Mueller, M. D., Syracuse, N. Y.
Surgery

Lloyd M. Nyhus, M. D., Seattle, Wash.
Surgery

John K. Lattimer, M. D., New York, N. Y.
Urology

The Lawson Memorial Lecture
I. S. Ravdin, M. D., Philadelphia, Pa.

Lectures, symposia, clinicopathologic conferences, round-table luncheons, medical motion pictures, technical exhibits and entertainment for visiting wives.

(All-inclusive registration fee — $20.00)

This program is acceptable for twenty-nine (29) accredited hours by the American Academy of General Practice

THE CLINICAL TOUR TO EUROPE VISITING LISBON, MADRID, ROME, VIENNA, BERLIN AND PARIS

Leaving March 7 via air and returning March 28, 1964

For information concerning the Assembly meeting and tour write Secretary, N. O. Graduate Medical Assembly, 1430 Tulane Avenue, New Orleans, La. 70112

Louisiana State Board of Health

JAMES R. STRAIN, M. D., M. P. H.

President



BOTTLED UNDER AUTHORITY OF THE COCA-COLA COMPANY BY
THE LOUISIANA COCA-COLA BOTTLING CO., LTD.



You Know--

that we know!

TRUSTED MANY MILLIONS OF TIMES

GOOD DRUG STORES — ONLY THE BEST

Katz & Besthoff, Inc.

Prescription Headquarters Since 1905

AMERICAN COLLEGE OF
CARDIOLOGY

"THE MARDI GRAS CONVENTION"

(Thirteenth Annual Convention)

February 12-16, 1964

Roosevelt Hotel, New Orleans, Louisiana

MEDICAL BOOKS

Of All Publishers

Any book on Medicine, Surgery, and Nursing

J. A. MAJORS COMPANY

147 South Liberty St.

NEW ORLEANS 12, LA.

——Catalogs cheerfully sent upon request——



For comprehensive control of the whole pain complex... helps the whole patient

Like a triad, the action of Trancogesic is direct and simple as 1,2,3. Its tranquilaxant component — chlormezanone — 1. reduces emotional reaction to pain . . . 2. decreases skeletal muscle spasm . . . and 3. its aspirin component dims the patient's perception of pain. Thus, Trancogesic controls the *whole* pain complex, helps the *whole* patient — *with unsurpassed tolerance.*

Each tablet of Trancogesic contains 100 mg. of chlormezanone and 300 mg. (5 grains) of aspirin. The usual adult dosage is 2 tablets of Trancogesic three or four times daily; the dosage suggested for children from 5 to 12 years is 1 tablet three or four times daily. Reactions to Trancogesic have been minor — gastric distress, and an occasional weakness, sedation or dizziness. Ordinarily, these may be reversed by a reduction in dosage or temporary withdrawal of the drug. Trancogesic is contraindicated in persons known or suspected to have an idiosyncrasy to acetylsalicylic acid. WINTHROP LABORATORIES, NEW YORK 18, N. Y.

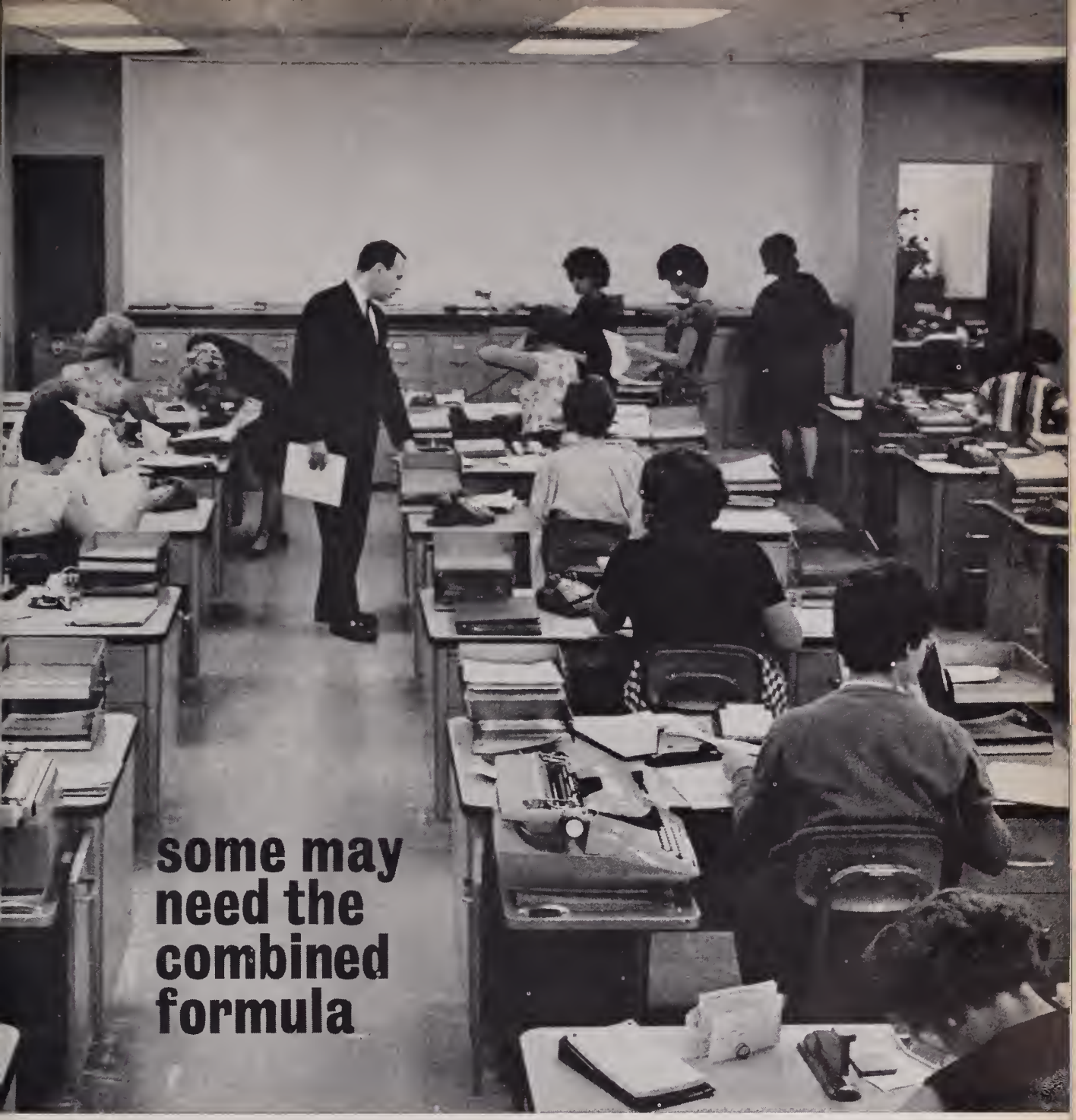
TRANCOGESIC*

CHLORMEZANONE with ASPIRIN

*TRADEMARK 100 MG. 300 MG.

Winthrop

1776M



ACHROCIDIN®

TETRACYCLINE HCl-ANTIHISTAMINE-ANALGESIC COMPOUND

Each Tablet contains:

ACHROMYCIN® Tetracycline HCl	125 mg.	Caffeine	30 mg.
Acetophenetidin (Phenacetin)	120 mg.	Salicylamide	150 mg.
		Chlorothen Citrate	25 mg.

Effective in controlling tetracycline-sensitive bacterial infection and providing symptomatic relief in allergic diseases of the upper respiratory tract. Possible side effects are drowsiness, slight gastric distress, overgrowth of nonsusceptible organisms, tooth discoloration. The last named may occur only if the drug is given during tooth formation (late pregnancy, the neonatal period, early childhood). Average Adult Dosage: 2 Tablets four times daily.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

7144-3



Helps to make the epileptic's life more meaningful

Dilantin® Kapseals®
(Diphenylhydantoin sodium)

PARKE-DAVIS

With modern, intelligent therapy, epilepsy has an excellent prognosis. "Well over 90 per cent of the patients can be adequately controlled so that they can lead a normal life and take a useful and respectable position in society."[1]

Diphenylhydantoin sodium is generally regarded as the standard in anticonvulsant medication because of its effectiveness in controlling grand mal and psychomotor seizures.[2-10] It possesses a wide margin of safety, and the incidence of side effects is minimal.[4] With this agent, oversedation is not a problem.[3] Moreover, its use is often accompanied by improvement in the patient's memory, intellectual performance, and emotional stability.[11]

Indications: Grand mal epilepsy and certain other convulsive states. *Precautions:* Toxic effects are infrequent: allergic phenomena such as polyarthropathy, fever, skin eruptions, and acute generalized morbilliform eruptions with or without fever. Rarely, dermatitis goes on to exfoliation with hepatitis, and further dosage is contraindicated. Eruptions then usually subside. Though mild and rarely an indication for stopping dosage, gingival hypertrophy, hirsutism, and excessive motor activity are occasionally encountered, especially in children, adolescents, and young adults. During initial treatment, minor side effects may include gastric distress, nausea, weight loss, transient nervousness, sleeplessness, and a feeling of unsteadiness. All usually subside with continued use. Megaloblastic anemia, aplastic anemia, leukopenia, agranulocytopenia, and pancytopenia have been reported. Nystagmus may develop. Nystagmus in combination with diplopia and ataxia indicates dosage should be reduced. Periodic examination of the blood is advisable.

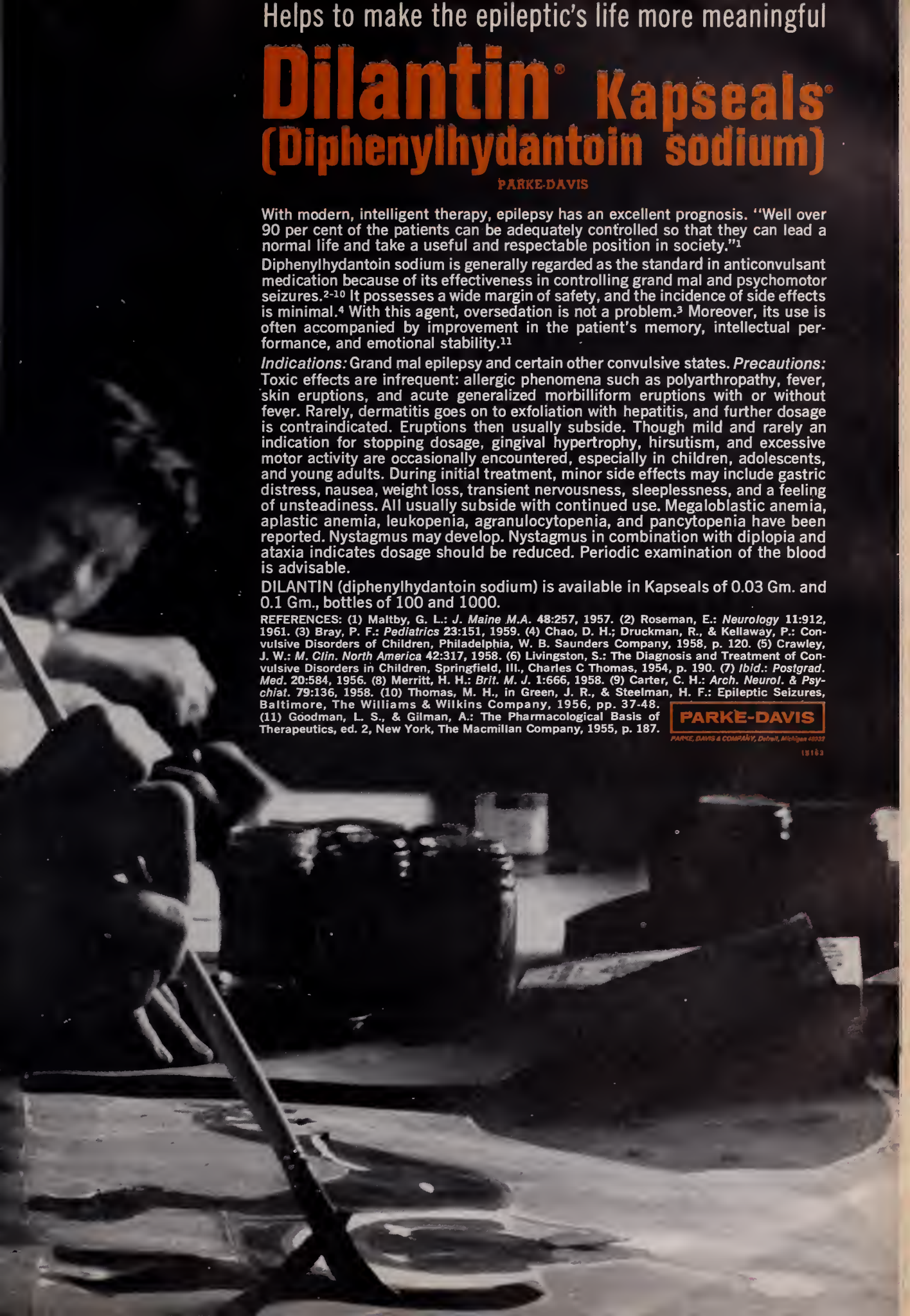
DILANTIN (diphenylhydantoin sodium) is available in Kapseals of 0.03 Gm. and 0.1 Gm., bottles of 100 and 1000.

REFERENCES: (1) Maltby, G. L.: *J. Maine M.A.* 48:257, 1957. (2) Roseman, E.: *Neurology* 11:912, 1961. (3) Bray, P. F.: *Pediatrics* 23:151, 1959. (4) Chao, D. H.; Druckman, R., & Kellaway, P.: Convulsive Disorders of Children, Philadelphia, W. B. Saunders Company, 1958, p. 120. (5) Crawley, J. W.: *M. Clin. North America* 42:317, 1958. (6) Livingston, S.: The Diagnosis and Treatment of Convulsive Disorders in Children, Springfield, Ill., Charles C Thomas, 1954, p. 190. (7) *Ibid.*: *Postgrad. Med.* 20:584, 1956. (8) Merritt, H. H.: *Brit. M. J.* 1:666, 1958. (9) Carter, C. H.: *Arch. Neurol. & Psychiat.* 79:136, 1958. (10) Thomas, M. H., in Green, J. R., & Steelman, H. F.: Epileptic Seizures, Baltimore, The Williams & Wilkins Company, 1956, pp. 37-48. (11) Goodman, L. S., & Gilman, A.: The Pharmacological Basis of Therapeutics, ed. 2, New York, The Macmillan Company, 1955, p. 187.

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

1816



RECOGNIZE THIS PATIENT?



"I don't sleep well . . . I dream a lot . . . wake up tired and irritable. I don't have any appetite . . . I'll never be cured."

When you recognize signs of depression and anxiety and associate them with an organic condition—add 'Deprol' to your therapy.

Typical conditions in which 'Deprol' should be considered for control of the associated depression and anxiety:

cardiovascular disorders ■ arthritis ■ cancer ■ menopause ■ alcoholism ■ obesity ■ asthma, hay fever and related allergies ■ chronic infectious diseases ■ dermatoses ■ G.I. disorders, and many other organic disturbances.

When you recognize depression and anxiety traceable to an emotionally charged situation with no somatic disorder—start the patient on 'Deprol'.

Typical situations in which 'Deprol' is indicated:

fear of cancer or other life-threatening disease ■ pre- and post-operative fears ■ postpartum despondency ■ family problems ■ death of a loved one ■ loss of work ■ retirement problems ■ financial worries, and many other stressful situations.

Deprol®

meprobamate 400 mg. + benactyzine hydrochloride 1 mg.

BRIEF SUMMARY: *Indications:* Depression, especially when accompanied by anxiety, tension, agitation, rumination or insomnia. *Side Effects:* Slight drowsiness and, rarely, allergic reactions, due to meprobamate, and occasional dizziness or feeling of depersonalization in higher dosage, due to benactyzine, may occur. Meprobamate may increase effects of excessive alcohol. Use with care in patients with suicidal tendencies. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Withdraw gradually after prolonged use at high dosage. *Complete product information available in the product package, or to physicians upon request.*

USUAL ADULT DOSAGE: 1 tablet q.i.d. May be increased gradually, as needed, to 3 tablets q.i.d.; with establishment of relief, may be reduced gradually to maintenance levels.

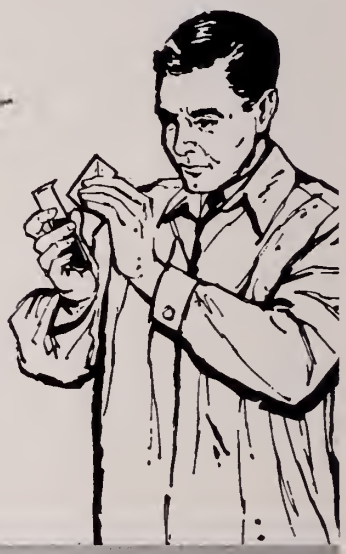
SUPPLIED: Light-pink, scored tablets. Bottles of 50.

WALLACE LABORATORIES / *Cranbury, N. J.*

CD-817

PROFESSIONAL MANAGEMENT SERVICE CAN HELP YOU BE A

FULL-TIME DOCTOR



Delegation of time-consuming work not requiring your training and experience releases you to more productive and rewarding work only you can do. The Professional Management Service is equipped to save you time . . . to relieve you and your staff of both menial and critical business tasks . . . and to increase your income. Our service offers you the benefits of specially trained, and equipped personnel under the careful supervision of specialists in medical business management, however you maintain complete control of your business activities!

We Offer These Services -

ACCOUNTS RECEIVABLE MANAGEMENT Professional Management Service trained bookkeepers, electric equipment and modern, proven-in-use methods designed to the needs of medical accounts are used to minimize the business workload in your office. Professional, accurate, itemized statements encourage prompt payment. This service pays big dividends in good will, time savings and net dollar return.

CONSULTATION Professional Management Service also includes special services, as needed, such as counseling on all insurance, investments, office personnel, fees, office lay-out, etc.

BASIC BOOKKEEPING SERVICE Formal accounting records are maintained by Professional Management Service. This includes income and expenses, depreciation, capital accounts, monthly financial report and tax return preparation.

PRE-COLLECTION PROGRAM A constructve approach to slow-paying accounts, subject to your control, this service is used with the ARM Service, above, or to supplement billing by your own staff. Custom designed to your needs and policies, but all time-consuming work is done by Professional Management Service.

COMPREHENSIVE BUSINESS SERVICE Most beneficial to physicians is the assumption of the complete business side of practice by the Professional Management Service in a co-ordinated, comprehensive service encompassing all functions named above.



PROFESSIONAL MANAGEMENT SERVICE

New Orleans, Louisiana

700 MAISON BLANCHE BLDG., PHONE 524 1177

A Specialized Service . . . Exclusively Professional



Notable increase in vigor, strength and sense of well-being

STROL (stanozolol-Winthrop), a heterocyclic steroid, combines nt anabolic effects with outstanding tolerance, stimulates appe- and promotes weight gain... restores a positive metabolic balance. ounteracts the catabolic effects of concomitant corticosteroid or H therapy. WINSTROL (stanozolol-Winthrop) rebuilds body tissue e it builds strength, confidence and a sense of well-being in con- ns associated with excess protein breakdown, insufficient protein ke and inadequate nitrogen and mineral retention.

Effects and Precautions: Prolonged administration can produce hirsutism, acne or voice change. In an occasional patient, edema been observed and in young women the menstrual periods have n milder and shorter. These side effects are reversible, and pa- ts receiving prolonged treatment should be examined and ques- tioned periodically so that, should side effects appear, the dosage may be reduced or administration of the drug discontinued for a time In patients with impaired cardiac and renal function, there is the pos sibility of sodium and water retention. Liver function tests may revea an increase in bromsulphalein retention, particularly in elderly pa tients. In such cases, therapy should be discontinued. Although it has been used in patients with cancer of the prostate, its mild androgenic activity is considered by some investigators to be a contraindication

Dosage: Usual adult dose, 1 tablet t.i.d. before or with meals; young women, 1 tablet b.i.d.; children (school age): up to 1 tablet t.i.d.; chil dren (pre-school age): ½ tablet b.i.d. Available as scored tablets of 2 mg. in bottles of 100. For best results, administer with a high protein diet.

WINTHROP LABORATORIES, NEW YORK 18, N. Y.

arked improvement in appetite / Measurable weight gain Winthrop

there is nothing "new" about Thorazine®



brand of

chlorpromazine

In the nine years since it became available to American physicians, Thorazine (chlorpromazine, SK&F) has been more widely used, more thoroughly investigated and more extensively documented than any other agent of its type.

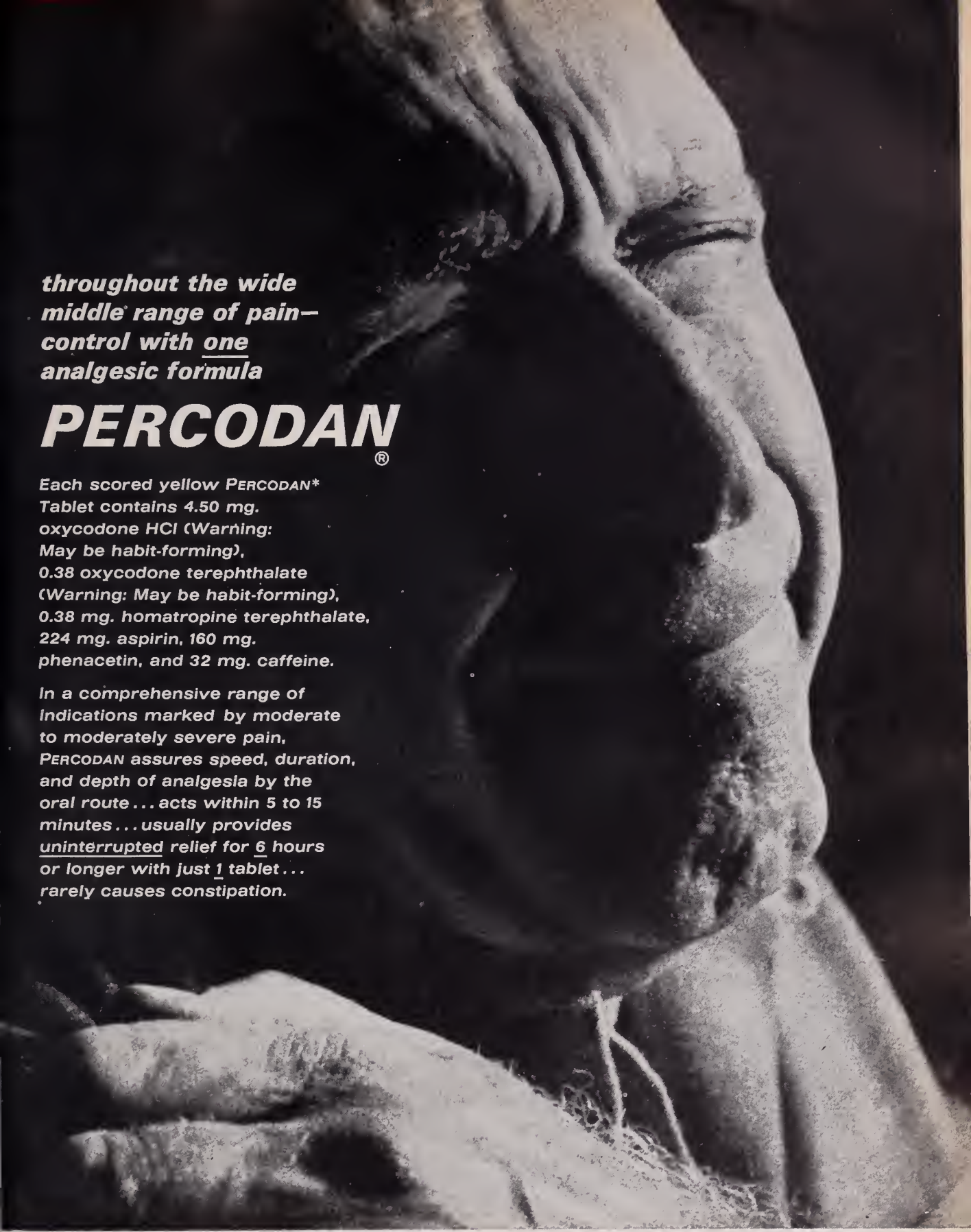
Its actions, effects—and side effects—are well known throughout the medical profession. Its efficacy has been clearly demonstrated. And when properly used, its advantages far outweigh any possible disadvantages.

This is why there is nothing "new" about Thorazine (chlorpromazine, SK&F). This is why it remains the first choice in many conditions—and the standard against which other agents are inevitably compared.

This is why it is one of the fundamental drugs in medicine.

SMITH KLINE & FRENCH
LABORATORIES, PHILADELPHIA

SK&F



throughout the wide middle range of pain— control with one analgesic formula

PERCODAN®

Each scored yellow PERCODAN Tablet contains 4.50 mg. oxycodone HCl (Warning: May be habit-forming), 0.38 oxycodone terephthalate (Warning: May be habit-forming), 0.38 mg. homatropine terephthalate, 224 mg. aspirin, 160 mg. phenacetin, and 32 mg. caffeine.*

In a comprehensive range of indications marked by moderate to moderately severe pain, PERCODAN assures speed, duration, and depth of analgesia by the oral route... acts within 5 to 15 minutes... usually provides uninterrupted relief for 6 hours or longer with just 1 tablet... rarely causes constipation.

Average Adult Dose—1 tablet every 6 hours. **Precautions, Side Effects and Contraindications**—The habit-forming potentialities of Percodan are somewhat less than those of morphine and somewhat greater than those of codeine. The usual precautions should be observed as with other opiate analgesics. Although generally well tolerated, Percodan may cause nausea, emesis, or constipation in some patients. Percodan should be used with caution in patients with known idiosyncrasies to aspirin or phenacetin, and in those with blood dyscrasias. **Also available:** Percodan®-Demi, containing the complete Percodan formula but with only half the amount of salts of oxycodone and homatropine. Both products are on oral Rx in all states where laws permit. Narcotic order required. **Literature on request.** **ENDO LABORATORIES Richmond Hill 18, New York**

Endo®

*U. S. Pats. 2,628,185 and 2,907,768

reduce or obviate the need for transfusions and their attendant dangers

KOAGAMIN is indicated whenever capillary or venous bleeding presents a problem.

KOAGAMIN has an outstanding safety record -- in 25 years of use no report of an untoward reaction has been received; however, it should be used with care on patients with a predisposition to thrombosis.



KOAGAMIN®

parenteral hemostat

Each cc contains: 5 mg. oxalic acid, 2.5 mg. malonic acid, phenol 0.25%; sodium carbonate as buffer.

Complete data with each 10cc vial. Therapy chart on request.

Chatham CHATHAM PHARMACEUTICALS, INC.
Newark 2, New Jersey
Distributed in Canada by Austin Laboratories, Ltd. • Paris, Ontario



Protects your angina patient better than vasodilators alone

'Miltrate' contains both pentaerythritol tetranitrate, which dilates the patient's coronary arteries, and meprobamate, which relieves his anxiety about his condition. Thus 'Miltrate' protects your angina patient better than vasodilators alone.

Pentaerythritol tetranitrate may infrequently cause nausea and mild headache, usually transient. Slight drowsiness may occur with meprobamate and, rarely, allergic reactions. Meprobamate may increase effects of excessive alcohol. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Like all nitrate-containing drugs, 'Miltrate' should be given with caution in glaucoma.

Dosage: 1 or 2 tablets *before meals* and at bedtime. Individualization required.
Supplied: Bottles of 50 tablets.

CML-9646

Miltrate®

meprobamate 200 mg.+ pentaerythritol tetranitrate 10 mg.

WALLACE LABORATORIES / *Cranbury, N. J.*

2 new works of timely interest

READY JANUARY FROM SAUNDERS

A New Book! ATOMIC ENERGY ENCYCLOPEDIA IN THE LIFE SCIENCES

Edited by C. W. Shilling

Covers Applications and Effects of Atomic Energy in the Fields of Medicine, Biology, and Agriculture. Every Item Verified by Experts of the U.S. Atomic Energy Comm.

This is the information you'll find in this authoritative new information source: the effects of atomic radiation on living material; the uses of radiation and radioisotopes in medicine, agriculture and biology; scores of other peaceful uses of atomic energy. Topics range from treatment of cardiac disease with radioactive isotope iodine-131 to methods of radioactive waste disposal. More than 1200 alphabetically-arranged entries give you precise information on topics with wide application to clinical practice and research as well as on topics of general, scientific, educational and historic interest.

Dr. Shilling and his distinguished contributors have combined the features of a dictionary with those of an encyclopedia. You'll find definitions for hundreds of technical terms (*absorption coefficient—acute radiation syndrome—cascade shower—Cerenkov radiation—mev—phantom—strontium unit—zeuto—neutron therapy—etc.*) as well as articles of a page or more on such subjects as *Recovery from Irradiation—Treatment of Radiation Illness—Blast Biological Damage—Radioactive Dosimetry —etc.*

More than 260 helpful illustrations portray a diversity of topics: *Example of radioactive contamination of the food chain—Cutaway drawing of a medical research reactor—Types of cell damage associated with irradiation —Schematic representation of the optical systems of the light and electron microscopes—Typical device for linear scanning of the entire body—etc.*

In addition—98 tables list such information as: *Colloidal and Large Particle Radioisotopes for Medical Uses —Gastrointestinal Absorption of Radioisotopes—Maximum Permissible Total Body Burdens for Four Radionuclides—etc.*

Here is a volume you will turn to for precise answers to specific queries, as well as for fascinating browsing in rare leisure moments.

Editor and Major Contributor, CHARLES WESLEY SHILLING, M.D., D.Sc., Consultant to the United States Atomic Energy Commission; Deputy Director, Division of Biology and Medicine, USAEC, 1955-60. With the Assistance of MIRIAM TEED SHILLING, M.A. Prepared under the auspices of the Division of Technical Information, USAEC. 474 pages, 7¼" x 10¼", with 268 illustrations, 98 tables. About $10.50. *New—Ready January!*

A New Book! Gellis and Kagan's CURRENT PEDIATRIC THERAPY

Specific Details of Over 300 Treatments Tailored to the Special Needs of Young Patients

A New Biennial Volume! This uniquely helpful *Current Pediatric Therapy Volume* brings you the same type of specific therapeutic recommendations that users of *Current Therapy* have enjoyed for some 15 years—*but keyed directly to the treatment needs of children.* Dr. Sydney S. Gellis and Dr. Benjamin M. Kagan have edited this new work, which will be revised every two years. Contributions by over 200 leading authorities pinpoint therapeutic details for more than 300 diseases —from *Kwashiorkor* and *Protein Deficiency* to *Infantile Cortical Hyperostosis.*

All discussions are approached from the pediatric point of view, with dosages, diets, prescriptions, etc., written for infants and children, and broken down, where necessary, into age or weight groups. You will find specific advice on: *selection of proper antimicrobial agents for various types of pneumonia; use of methicillin and oxacillin in staphylococcic empyema; new dosage schedule for digitalis preparations administered to infants; detailed instructions for steroid therapy in leukemia; etc.*

Whether you need a diet for a phenylketonuric child, help on deciding the proper dosage of antiepileptic medication, or late information on immunization schedules, you'll find it spelled out in *Current Pediatric Therapy.*

A Biennial Volume. By 248 Leading Authorities. Edited by SYDNEY S. GELLIS, M.D., Professor of Pediatrics and Chairman of the Department of Pediatrics, Boston University School of Medicine; Director of Pediatrics, Boston City Hospital; and BENJAMIN M. KAGAN, M.D., Director, Department of Pediatrics, Cedars of Lebanon Hospital, Los Angeles; Clinical Professor of Pediatrics, University of California, Los Angeles. About 815 pages, 7⅛" x 10½". About $16.00.
New—Ready January,1964!

To Order Mail Coupon Below!

W. B. SAUNDERS COMPANY
West Washington Square, Philadelphia 5, Pa.

Please send when ready and bill me:

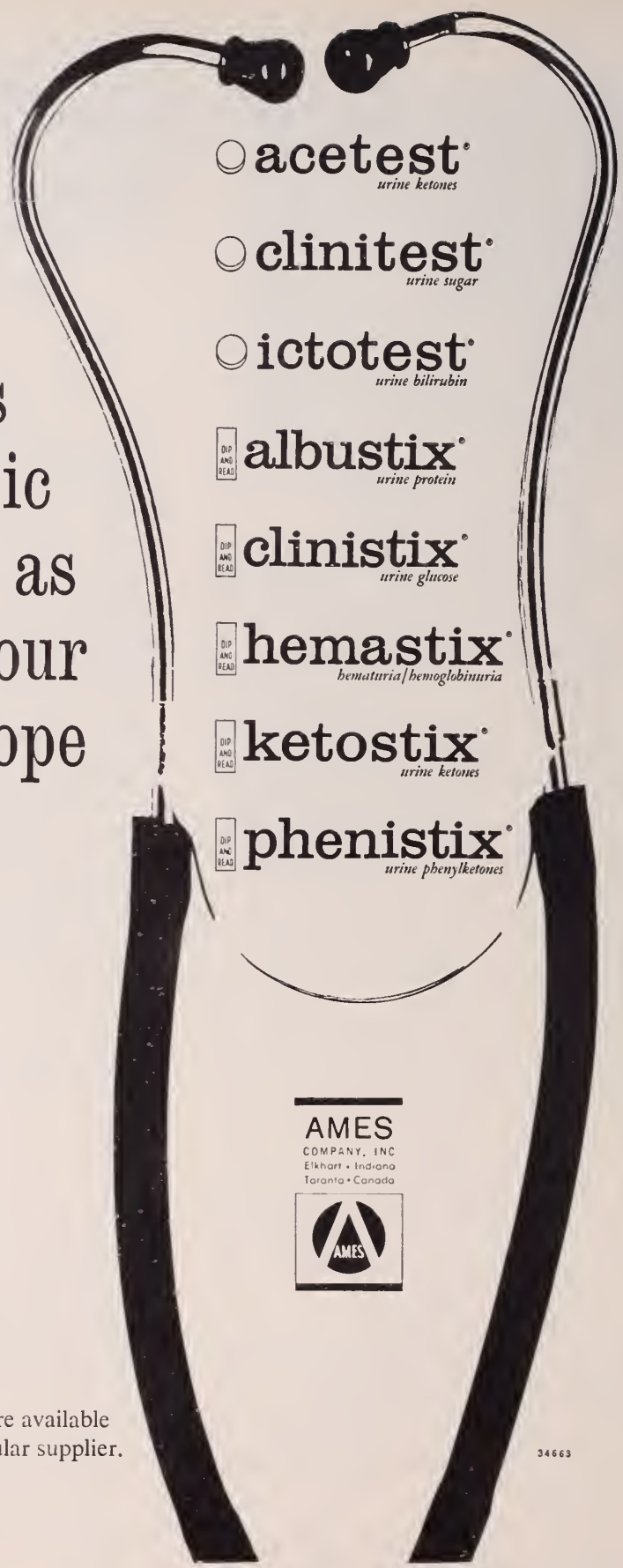
☐ *Atomic Energy Encyclopedia* . . . About $10.50
☐ *Current Pediatric Therapy* About $16.00

Name_____

Address_____

SJG 12-63

urine tests as basic as your stethoscope



acetest®
urine ketones

clinitest®
urine sugar

ictotest®
urine bilirubin

DIP AND READ albustix®
urine protein

DIP AND READ clinistix®
urine glucose

DIP AND READ hemastix®
hematuria/hemoglobinuria

DIP AND READ ketostix®
urine ketones

DIP AND READ phenistix®
urine phenylketones

AMES
COMPANY, INC
Elkhart • Indiana
Toronto • Canada

AMES products are available through your regular supplier.

34663

Schering



Your recommendation of **Coricidin** assures responsible treatment of common colds. For added decongestant action, recommend Coricidin "D" Decongestant Tablets.



Each CORICIDIN Tablet contains: CHLOR-TRIMETON® (chlorpheniramine maleate, Schering) 2 mg., aspirin 0.23 Gm., phenacetin 0.16 Gm., caffeine 0.03 Gm.

Each CORICIDIN "D" Tablet contains phenylephrine 10 mg. in addition to the above ingredients.

CORICIDIN Tablets, brand of antihistaminic-antipyretic-analgesic compound

S-161



Empty capsules are filled by the finest precision machinery available . . . but no machine is perfect. That's why all Lilly Pulvules® (filled capsules) are given the "thirty-minute checkup" to be certain that uniformity is maintained. At least once every thirty minutes ten filled capsules are taken from each machine and carefully weighed on a prescription balance. In addition, the checks are double-checked at least four times each day . . . another of the many stringent controls which assure you that the Lilly products you prescribe provide quality that merits the full measure of your confidence.

Eli Lilly and Company • Indianapolis 6, Indiana, U.S.A.

Lilly

300680

The Journal

of the

Louisiana State Medical Society

$4.00 Per Annum, 35c Per Copy
Vol. 115, No. 12

DECEMBER, 1963

Published Monthly
1430 Tulane Avenue, New Orleans, La., 70112

Urology and Renal Physiology*

• This paper presents certain phases of the relationship between renal physiology, functional tests and pathology. The fundamentals are necessary for understanding of renal disease.

J. U. SCHLEGEL, M. D.†
New Orleans

MANY medical students and physicians look upon physiological research as something which is perhaps important, but often too intricate and complicated for them to really bother with. Basically, I suppose it is because they somehow feel that such research is a far cry from their daily problems with the patients and really not too practical for them unless, of course, something materializes which they can directly use in the therapy of their patients. Naturally, to physicians this is the ultimate goal of any research activity. It is, however, unfortunate that there is such a great deal of apathy on behalf of many physicians and medical students regarding the value of their orientation or participation in medical research. Only through the physicians' understanding of the problems involved will as many applications as possible ultimately materialize.

Advances in renal physiology are particularly pertinent in this regard since this is the baseline for application of renal pathology.

The Kidney Regulates Volume and Composition of Body Fluid

The kidney occupies a unique position among the organs of the body, inasmuch as it is one of the most intricate organs and perhaps one of the most difficult ones to study. It is entrusted with the regulation of body fluids, composition as well as volume. This in itself is a tremendous task but, in addition, it serves an endocrine function which perhaps is tied in with its excretory function in a manner that only in recent years has come to light. Numerous outstanding basic scientists have contributed greatly to our knowledge of the kidney. It is essential that the physician have enough knowledge of the basic physiology and pathology of the human kidney to appreciate advances in basic research and thereby to contribute to the application of many of the discoveries regarding this organ.

In the following are mentioned a few areas where basic renal physiology has played a great part in proper planning of prevention and therapy which today occu-

* Supported in part by the Office of Naval Research, grant Nonr-475(07) and Public Health Service, grant HE04659.

Presented at the Eighty-third Annual Meeting of the Louisiana State Medical Society in New Orleans, May 7, 1963.

† Tulane University School of Medicine, Department of Surgery, Division of Urology, New Orleans, Louisiana.

pies an important role in the armamentarium of the urologist.

Antidiuresis

The term osmotic diuresis is an old and well-established entity, but it is only recently that the utilization of the principles involved have been applied in postoperative care.[1-3] The term antidiuresis is perhaps unfortunate, but it is applied to a situation in which free water is reabsorbed in the collecting ducts, resulting in a concentrated urine. This phenomenon in a normal individual is caused by a rising electrolyte concentration of the serum which, in turn, stimulates the osmolar receptors to signal the posterior pituitary to produce and release antidiuretic hormones. It has been demonstrated that following trauma or as a result of pain, apprehension, fear, etc., antidiuresis is an almost inevitable result.[4, 5] The antidiuresis created from these latter stimuli is, however, not reversible by the administration of water since it does not result from an increasing electrolyte concentration of the serum. On the contrary, it will persist despite dilution of serum electrolytes. The result of this type of antidiuresis as seen, for instance, following trauma, will be edema in the face of hydration to a degree that is proportional to the amount of water given.

The urine output during antidiuresis is determined exclusively by the amount of solutes available for excretion, which with inadequate food intake is limited to the solutes liberated from the catabolism resulting from trauma and/or starvation.[6] The urine volume during antidiuresis is thus determined primarily by the amount of solute available for excretion rather than the amount of water administered.[7] It has been adequately demonstrated that the administration of fluids containing excretable solutes in proper concentrations will result in a urine volume that is quantitative and directly related to the amount of solute administered under conditions of antidiuresis secondary to trauma.[2] Urea and mannitol have both been used for such purposes and the administration of these solutes in proper concentration will allow a fluid administration of almost any magnitude desired up to a maximum of eight to nine liters per 24 hours without any fear of overhydration. Shock or chronic renal disease will naturally invalidate this situation. It is thus feasible, immediately following trauma, to obtain a urine volume of almost any magnitude desired. This principle has been utilized to prevent postoperative clot retention by maintaining an adequate urine flow.[8] The advantage of this procedure is that the bladder, in essence, is irrigated by a high urine flow. It is also possible that a high urine volume may be beneficial when nephrotoxic substances might be present, since a dilution of such in the tubules may prevent what otherwise could develop into an acute renal shutdown.[9]

The forced administration of fluids in patients with acute pyelonephritis or a ureteral obstruction caused by a stone may well be beneficial in principle. However, it is impossible to predict whether antidiuresis may be present as a result of pain, morphine administration or other factors. If such were the case, fluid retention with edema would result rather than a correspondingly high urine volume. The administration of fluids with the proper concentration of solutes such as urea or mannitol, however, results in a quantitative return, provided that kidney function is reasonably normal and regardless of whether antidiuresis is present or not.

Treatment of Ureteral Obstruction Following Instrumentation

It has been demonstrated that ureteral obstruction secondary to edema following instrumentation can be readily overcome by the administration of intravenous glucose containing 4 per cent urea.[10, 11] Administration of equal fluid volume without the presence of urea resulted in enhancement rather than release of the obstruction. It is well known that ureteral peristalsis is a result of the volume of urine presented, and it appears logical that the volume of urine presented can be adequate and predetermined only if

fluids are administered containing an excretable solute. It is possible that patients will respond occasionally following a water load with an adequate output, but it is impossible to predict this, and should antidiuresis be present, which often is the case, adequate urine volume will only be achieved if the administered fluid contains a proper amount of excretable solutes.

These principles then are results of applied renal physiology and certainly in our experience have been most rewarding. They do not only apply to therapy and prevention of possible renal disease, but also to diagnostic procedures.

Prevention of Reflex Anuria

Urologists are well aware of the frequently observed low urine volume in a patient during ureteral catheterization. Even in cases where prior hydration has been quite adequate, it is not uncommon to find patients where output is exceedingly low. Such a patient is also the best possible candidate for postinstrumental pyelonephritis, or so-called reflex anuria. To avoid this problem the administration of 4 per cent urea in 5 per cent dextrose in water is advocated since this will result in a quantitative return with a urine volume that is dependent exclusively upon the volume of 4 per cent urea administered in patients with reasonably normal kidney function.[10] It is obvious that this response holds true only if the patient is not in shock. It has been our experience also that renal shutdown following ureteral catheterization even with large catheters does not occur if these precautions are adhered to. It is obviously important that the administration of osmotic diuretics be done early before any renal damage has occurred.

We prefer use of osmotic diuresis in most routine cases, since it is rather impossible to predict which cases may present a problem, and also since the administration of 4 per cent urea in 5 per cent dextrose in water, in our experience, has never had any adverse effect.

It should also be added that we have favored the use of urea as an osmotic diuretic since we have shown that urea in concentrations found in concentrated urine has a bacteriostatic effect.[12] Recent experiments in dogs with induced pyelonephritis have demonstrated the effectiveness of intravenous urea in decreasing the incidence of clinical and histologic pyelonephritis.[13]

Use of Radioisotopes

The use of radioisotopes has gained increased acceptance in the study of the kidneys. The radioactive renogram developed by Chester Winter is a method whereby a radioiodine-labeled compound is injected intravenously, and by means of scintillation detectors placed over each kidney the secretory and excretory function of the individual kidney is directly traced on a moving chart.[14] This method undoubtedly has some usefulness in assessing gross differences in function between the two kidneys and is of unquestioned value regarding the diagnosis of obstructive uropathy. It certainly represents no replacement of established radiologic techniques, but rather an addition to our diagnostic armamentarium. Despite the relatively high initial cost, the use of the renogram technique can, even with our present knowledge, undoubtedly justify the expense.

A rather new field with the use of radioisotopes, which is still in its infancy, is renal scanning. Several methods have been developed which depend upon the selective concentration of radioisotopes in the kidney. Radio-Hippuran containing I^{131} has been used[15] as has Neohydrin which contains radioactive mercury.[16] Both of these materials, however, will concentrate in the urine to an even greater extent than in the renal parenchyma and it is feared that the content of highly radioactive urine in pelvis and infundibula will obscure pathology of minor order. Another method involves the administration of radioactive Hippuran following blocking of the ureters.[17, 18] This technique appears to be promising in principle since the concentration of Radio-Hippuran in

the pelvic urine is zero following cessation of urine flow resulting from acute ureteral obstruction. The renal medulla has a radioactivity identical with serum, while the renal cortex contains an amount of five to ten times that of serum. This finding implies that a scan under such circumstances is exclusively a scan of the renal cortex. With equipment available today it is feasible to scan areas of decreased blood flow down to a diameter of one centimeter. This method could obviously be useful in the diagnosis of focal pyelonephritis, segmental renal ischemia, as well as smaller tumors where diagnosis by present radiologic and other techniques is difficult, if not impossible.

Radioisotopes in Renal Clearances

In the field of renal clearances, radioisotopes have also come into use. Many attempts have been made to do clearances by obtaining constant serum levels by a single injection subcutaneously or intramuscularly. However, the volume of Para-aminohippurate or similar drugs necessary for injection is rather large and no success has been obtained. The development of radioisotopes has made micro-analysis simple and permitted techniques to be developed by which constant blood levels can be obtained by the injection of as little as a tenth of a cc. of Radio-Hippuran intradermally. We have developed methods whereby one can inject about one hundred microcuries of Radio-Hippuran and obtain constant serum levels for one to two hours.[18] Clearances can then be obtained by collecting urine and a blood sample in the middle of the collection period and determining Radio-Hippuran concentration using a well counter. Effective renal plasma flow determination[19] can thus be obtained easily, rapidly and with an accuracy as good or better than with the usual colorimetric methods. It appears feasible to use Radio-Hippuran also for determination of filtration rate since clearances with this material following Benemid administration are equal to inulin.[20]

Summary

I have referred to but a few examples within the field of renal physiology which have considerable bearing upon diagnostic procedures in the field of pyelonephritis, renal hypertension and renal tumors as well as their therapeutic and prognostic application in impeding renal shut-down and surgically or traumatically induced disturbances in the homeostatic mechanism. The role of the kidney is seemingly endless as a vital organ involved with excretory and secretory function in addition to its possible metabolic role in hemopoiesis; our ignorance is still vast, but the challenge is enormous.

A great wealth of data continues to accumulate regarding the biochemistry, physiology and pathology of the kidney. Our job must be to apply what is useful for prevention, diagnosis and therapy as well as to conduct and stimulate continued research to improve the present status which is far from satisfactory.

Acknowledgments

This opportunity is taken to acknowledge the cooperative efforts of the following people whose interest and work resulted in the preceding studies: Roberta M. O'Dell, Ph.D., Blackwell Evans, M. D.,* Joseph L. Izenstark, M. D., James Burden, M. D.,* Parviz Raffii, M. D.,* Beverly Fasullo, R. N., Mary Cazalas, M. S., and Barbara Massony, B. S.

References

1. Moore, Francis D.: Metabolic Care of the Surgical Patient. W. B. Saunders Co., Philadelphia, 1959.

2. Schlegel, J. U., Eldrup-Jorgensen, S., Stone, H. and Mihajlov, V. S.: Studies in Metabolism of Trauma: 1. Mainteuance of Homeostasis. Ann. Surg., 145:12, 1957.

3. Schlegel, J. U.: Posttraumatic Fluid Therapy. Acad. Med. N. J. Bull., 4:45, 1958.

4. Wolf, A. B.: The Urinary Function of the Kidney. Grune and Strattou, New York, 1950.

5. Dudley, H. F., Boling, E. A., LeQuesne, L. P. and Moore, F. D.: Studies on Antidiuresis in Surgery: Effects of Anesthesia, Surgery and Posterior Pituitary Antidiuretic Hormone on Water Metabolism in Man. Ann. Surg., 140:354, 1954.

6. Schlegel, J. U. and Stone, H.: Volume and Electrolyte Homeostasis Duriug Antidiuresis. Am. J. Physiol., 192:287, 1957.

7. Kerrigan, G. A., Talbot, N. B., and Crawford, J. D.: Role of the Neurohypophyseal-antidiuretic-hormone-renal System in Everyday Clinical Medicine. J. Clin. Endocr. & Metab., 15:265, 1955.

* Fellow under U. S. Public Health Service Grant number GRT-5057.

8. Schlegel, J. U., Jorgensen, H., McFassen, A. and Scott, W. W.: A Physiological Approach to Bladder Irrigation in Gross Hematuria. J. Urol. 79:224, 1958.

9. Owen, K., Desautels, R. and Walter, C. W.: Experimental Renal Tubular Necrosis—the Effect of Pitressin. Surgical Forum, 1953, IV:459. Philadelphia: W. B. Saunders Co., 1954.

10. Schlegel, J. U., Okamoto, S. and O'Dell, R. M.: Effect of Hydration on Experimentally Induced Ureteral Edema. J. Urol., 87:39, 1962.

11. Cohen, A. E., Boudreaux, J. L. and Schlegel, J. U.: Ureteral Obstruction Following Retrograde Catheterization. J. Urol., 87:662, 1962.

12. Schlegel, J. U., Cuellar, Jorge and O'Dell, R. M.: Bacterial Effect of Urea. J. Urol., 86:819, 1961.

13. Raffii, Parviz, Flinner, Robert, Schlegel, J. U. and O'Dell, R. M.: Efficacy of Urea in Preventing Experimental Pyelonephritis in Dogs. (In Press).

14. Winter, C. C.: A Clinical Study of a New Renal Function Test: The Radioactive Diodrast Renogram. J. Urol., 76:182, 1956.

15. Haynie, T. P., Nofal, M., Carr, E. A., and Beirwaltes, W. H.: Scintillation Scanning of the Kidney with Radioiodinated Contrast Media. Abs. Clin. Res., 8:288, 1960.

16. McAfee, John G. and Wagner, Henry, N.: Visualization of Renal Parenchyma by Scintiscanning with Hg^{203} Neohydrin[1]. Radiology, 75:820-821, 1960.

17. Schlegel, J. U., Izenstark, J., Cuellar, J., and O'Dell, R. M.: A Technique for Kidney Scanning. Southern Med. Jour., 55:471, 1962.

18. Izenstark, J., Schlegel, J. U., Cuellar, J. and O'Dell, R. M.: Renal Scanning Using Stop-flow. Radiology, 78: 425, 1962.

19. Smith, B. G., O'Dell, R. M. and Schlegel, J. U.: A Simplified Method of Determining Renal Plasma Flow. J. Urol., 87:106, 1962.

20. Evans, B., O'Dell, R. M. and Schlegel, J. U.: Glomerular Filtration Rate Determination with I^{131} Hippuran. Fed. Proc., 22:277, 1963.

Drugs to Empty Beds

When I edited a "Handbook of Therapy" in 1914, I found that some 30 or 40 remedies were being used in the treatment of tuberculosis, none of which were of much avail; then eventually a specific remedy was discovered, namely streptomycin, discovered by Selman Waksman, and immediately tuberculosis began to come under control. Still later came another pharmaceutical discovery, paramino salicylic acid, and following that, isoniazide; and now by the combination of these remedies a vast majority of sanitoriums find themselves with empty beds.—Morris Fishbein, M. D., at fourth annual New Jersey Pharmaceutical Industry Day, Union, New Jersey, Oct. 25, 1962.

Peritoneal Dialysis

• The author presents the technic and procedure for peritoneal dialysis. He gives illustrative case histories. The discussion shows that this is a readily available therapeutic device in uremia.

IKE MUSLOW, M. D.
Shreveport

ALTHOUGH peritoneal dialysis was first used in man in 1923, technical difficulties and poor understanding of acute renal failure prevented its widespread application.

Even today when peritoneal dialysis is mentioned, many recall the sad experiences of having two catheters placed in opposite sides of the peritoneal cavity. Large quantities of fluid had to be sterilized. Infection, overhydration, circulatory collapse or difficulty in draining the irrigating fluid seemed invariably present. The procedure required constant physician care and disruption of hospital routine.

History

This dismal outlook was changed in 1958 by Maxwell and his group[1] when they described a simple technique for intermittent peritoneal dialysis. The procedure was further simplified by mass production of inexpensive peritoneal dialysis sets, complete with catheter, disposable tubing, dialysis fluid, and instruction sheet. This simplification and a change in the management of acute renal failure revived the use of peritoneal dialysis, even in centers with available facilities for hemodialysis.

The classical management of acute renal failure was first challenged by Scribner[2] and Teschan.[3] A need for a change in treatment, was borne out by the findings of a study group on acute renal failure held in 1957 at the Brooke Army Medical Center. One thousand and forty-four cases of acute renal failure with a mortality rate of 49 per cent were reviewed. Of this number, 142 were transfusion reactions with 56 fatalities, 137 nephrotoxic cases with 44 fatalities, and 270 post obstetric cases with 82 fatalities. In most papers these three groups had been classified as benign forms of acute renal failure with a good prognosis for recovery. The statistics failed to bear out this impression and indicated all forms of acute renal failure as potentially lethal, even in the best equipped centers. Because of the disturbingly high mortality rate, Scribner and Teschan began using prophylactic hemodialysis in all cases of acute renal failure. The idea was to prevent rather than treat clinical uremia.

Scribner dialyzed daily through the beginning of diuresis, and Teschan dialyzed whenever the BUN reached 120 mgs. per cent. Their studies indicated a reduction of both the mortality and morbidity rate and have been widely accepted as a major advancement in the treatment of acute renal failure. In their hands, hemodialysis was easy to perform, for manpower was inexpensive and readily available. This is not true, however, in an area outside of a medical center with no residents or fellows to aid in the dialysis. On the other hand, peritoneal dialysis could be used for prophylactic treatment, with a minimal number of personnel and in smaller hospitals. For this reason, I feel that further discussion of peritoneal dialysis is both timely and useful.

Technique

The placement of the catheter into the peritoneal cavity requires only 15 to 20 minutes. It is preferably done in a treatment room, but may be accomplished in the patient's room. The technique is adequately described with all peritoneal dialysis sets and need not be repeated in this

* Presented at the Eighty-third Annual Meeting of the Louisiana State Medical Society in New Orleans, May 7, 1963.

discussion. The mechanical exchange of the dialysis fluid can be handled by a nurse or other suitable personnel. Even family members, with the aid of the floor nurse, have handled the exchange of fluids.

The kinetics of peritoneal dialysis have been well worked out by Boen and his group.[4] Urea has the highest diffusion rate with the steepest rise during the first 30 minutes and equilibrium between plasma and dialysis fluid is reached in 120 minutes. Potassium diffuses almost as rapidly and is followed at a slightly slower rate by creatinine, uric acid, and phosphate. Calcium and magnesium are slower due to their partial binding to plasma proteins.

The maximum clearance of urea with peritoneal dialysis is approximately 28 cc. per minute. This is achieved by exchanging 3.5 liters of dialyzing fluid per hour. For practical purposes there is very little clearance difference between a volume of 3.5 liters and 2.5 liters. Furthermore, unless a dire emergency exists, there is no need to achieve this rate of exchange. Once the acute uremic state is corrected, the dialysis can be extended to two hours per exchange and the number of exchanges per 24 hours determined by the rapidity of the BUN rise.

In 30 minutes, glucose is absorbed at the rate of 5 to 12 grams per liter of dialysis fluid. This serves for nutrition, and aids in combating potassium intoxication through incorporation of K^+ in glycogen synthesis. The blood glucose of nondiabetics usually remains slightly elevated throughout the procedure.

The rate of K^+ removal can be controlled by varying the concentration in the dialysis fluid. Even though the dialysis fluid K^+ concentration is kept at zero and K^+ continues to cross the peritoneal membrane, the serum potassium usually reaches a level between 3 to 4 meq/liter and falls no further. With the patient eating, depletion of body K^+ is no problem.

One of the major advantages of peritoneal dialysis is its ability to remove water from the extracellular fluid compartment. A 1.5 to 2 per cent glucose concentration is isotonic to plasma; it results in neither a loss nor gain in body water. A 2.5 per cent and higher glucose concentration is hypertonic and causes water removal from the extracellular fluid compartment.

Procedure

Fluid is stocked in concentration of 1.5 per cent and 7 per cent. When a hypertonic solution is desired, a 4.25 per cent glucose concentration is usually adequate and easily made by mixing equal quantities of the stock 1.5 per cent and 7 per cent solutions. In dire emergencies, such as acute pulmonary and cerebral edema, a 7 per cent solution may be desirable. Prolonged use of 7 per cent concentration, however, can result in hypovolemia and shock.

Peritoneal dialysis is tolerated for long periods without undue discomfort or complications. Leakage, one of the minor complications, can usually be controlled by purse-string application. Infection is extremely uncommon, and in some centers, antibiotics are not used prophylactically. If antibiotics are desired for treatment of infection, then large amounts of penicillin or tetracyline can be instilled into the peritoneal cavity. The patient may be ambulatory as his condition permits, and he may undergo dialysis sitting in a chair.

Food and water are allowed as desired, for peritoneal dialysis, if managed correctly, is capable of handling the catabolic products and excess water. An accurate intake and output record must be kept and hypertonic dialysis fluid used when indicated. With prophylactic dialysis, nausea and vomiting are seldom problems and intravenous fluids are not needed. The incessant craving for water is no longer a problem. Oral hygiene is considerably better, with considerable less danger of acute parotitis.

Prolonged dialysis in the patient unable to eat, may result in hypoproteinemia due to a loss of approximately 0.5 gram of protein per liter of dialysate. This loss can be diminished by administration of serum albumin or whole blood.

As dialysate urea and K^+ after two hours, is equivalent to plasma values, we have run analysis on the last dialysate rather than venous samples. Correlation is excellent and allows additional comfort for the patient.

Comparison with Hemodialysis

Peritoneal dialysis has one-fifth the clearance rate of the twin coil kidney used in hemodialysis. In patients in extremis or with dialyzable poisons, hemodialysis, with its more rapid action, is the procedure of choice. After hemodialysis, peritoneal dialysis may be used in prophylactic management. If necessary, peritoneal dialysis can be started while awaiting the setting up and cannulation for hemodialysis.

Peritoneal dialysis is contraindicated in cases of recent abdominal injury with hemorrhage. It has been used after recent abdominal surgery and in one case, complicated by a perforated duodenal ulcer.

On a rare occasion, it may be consistently impossible to recover the dialysate. This occurred in a chronic uremic, and an autopsy did not disclose an anatomic reason for this failure.

Case Reports

Case No. 1—FWC, a 17 month old white male infant, born to a diabetic mother, was first admitted on December 13, 1962. He had been ill for approximately two weeks with an upper respiratory infection. Intensive antibiotic therapy including both oral and parenteral medication had been prescribed. In spite of therapy, intermittent fever and respiratory symptoms persisted.

One and a half days prior to admission, watery stools had complicated the illness. Physical examination on admission revealed a normal temperature, moderate pharyngitis. An erythematous eruption was noted over the posterior trunk, back of the neck, and over all extremities. Completed blood picture revealed 11.0 grams hemoglobin, white blood cells 5,000, 25 neutrophiles, 69 lymphocytes, and 6 monocytes. Urinalysis: specific gravity 1.020, negative for albumin, glucose, and formed elements. He was discharged in twenty-four hours on symptomatic therapy. Discharge diagnoses were viral pharyngitis and gastroenteritis.

He was readmitted forty-eight hours later, because of vomiting, anuria, and temperature elevation. Physical examination was entirely normal with the exception of a temperature of 102.8° (r). Complete blood picture revealed 11.4 grams hemoglobin, white blood cells 17,700, 76 neutrophiles, 23 lymphocytes, and 1 monocyte. Catheterization obtained 10 cc. urine. Urinalysis revealed 4+ albumin, hyaline and granular casts and 10 to 20 rbc per high power field. On the evening of admission he received by clysis 500 cc. of 2½ per cent glucose in one-half normal saline. Oral intake was 180 cc. with emesis on one occasion of an undetermined amount. The second hospital day he vomited on two occasions and took 420 cc. by mouth. At noon on the second hospital day, the mother noticed crossing of his eyes, and twitching of the hands. At 1:30 p.m. he began having a generalized seizure that lasted until 3:30 p.m. and was finally terminated by intramuscular sodium pentothal. Spinal tap was negative; blood chemistries revealed a blood sugar of 182 mgs. per cent, Na. 136 meq/L., K 5.7 meq/L., and a CO_2 of 15 meq/L. Although convulsions did not recur he remained restless even when sleeping. Catheterization revealed

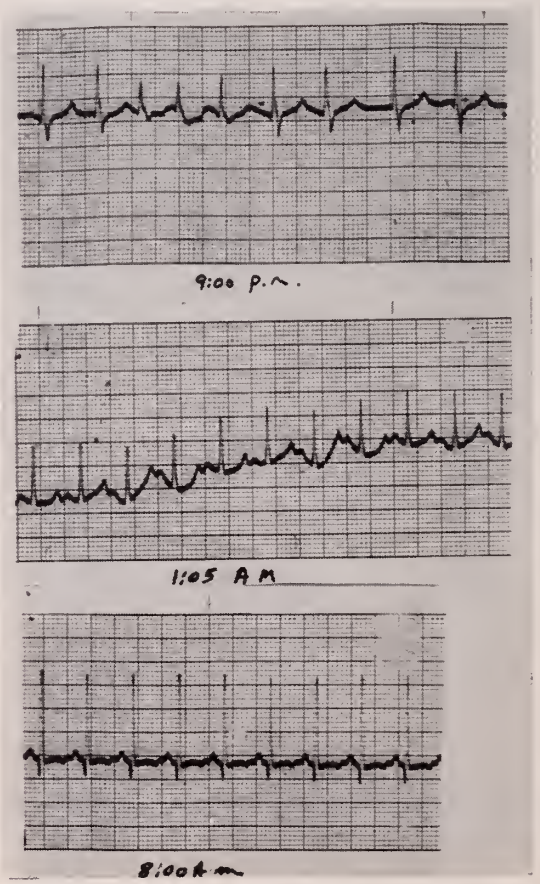


Figure 1. Electrocardiograms showing considerable improvement. a. Nine p.m., December 20, 1962; b. One a.m., December 21, 1962 (after two peritoneal exchanges); c. Eight a.m., December 21, 1962.

only 15 cc. of urine in spite of no voiding for at least two and one-half days. Blood pressure was recorded as 120/80 and puffiness of his eyes was noted that evening. Respiratory rate remained between 40 to 50 per minute. On the third hospital day, intake by mouth was 570 cc. with no urine output. On the fourth hospital day a BUN was 137 and intake 930 cc. with no urine output. On the fifth hospital day, catheterization obtained 14 cc. of urine. Antistreptolysin O titer was zero Todd units, BUN 141, creatinine 7.7, and potassium 8.1 meq/Liter. He became more irritable, tachypneic, and would not lie in his bed. He developed a continual hacking cough and cardiac irregularity. Electrocardiogram (Fig. 1) at 9:00 p.m. revealed flat-

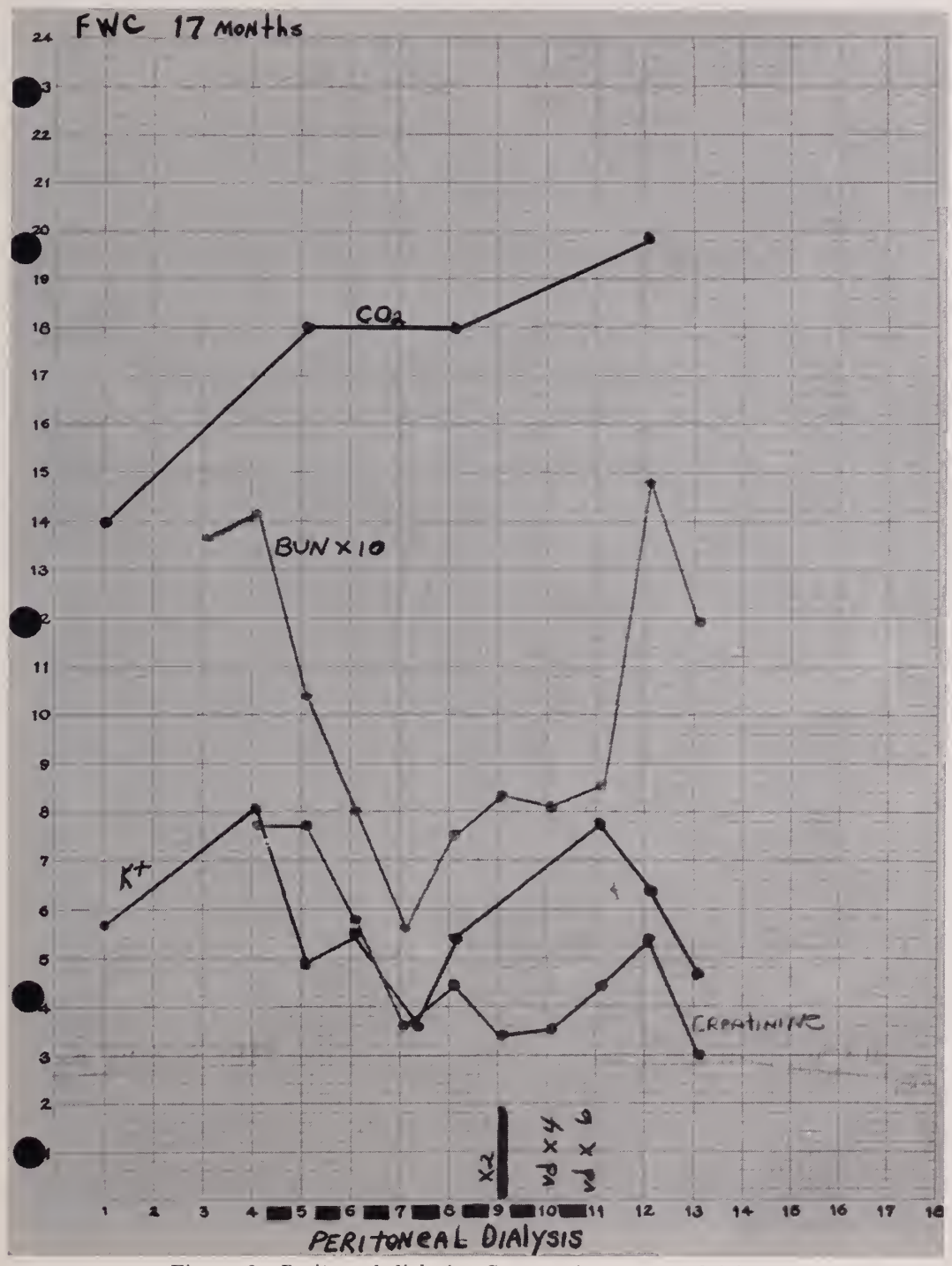


Figure 2. Peritoneal dialysis. Course of acute renal failure.

tening of P waves and prolongation of the QRS complex. Attempts to combat K+ intoxication with I.V. medication was unsuccessful because of the inability to find a suitable vein.

A peritoneal dialysis was started at 11:00 p.m. 500 cc. of a 4 per cent glucose dialysis fluid were instilled and one-half hour later 650 cc. were removed. This dialysate contained 2.49 meq/L. of K+ and 74.8 mgs. per cent or 478 mgs. of urea. 500 cc. of a 4 per cent dialysis fluid were again instilled and one hour later 700 cc. of dialysate were removed. Analysis of this fluid revealed 3.5 meq of K+ and 122 mgs. per cent or 854 mgs. of urea. A repeat electrocardiogram (Fig. 1), after these two exchanges revealed considerable improvement though only 6 meq of K+ had been removed. This would indicate K+ had probably been driven into the cells, as well as having been antagonized by the transfer of Na, Ca, and lactate into the extracellular fluid compartment. With removal of 350 cc. of excess water, there were complete cessation of coughing and slowing of the respiratory rate. He became much less irritable and appeared to



Figure 3. Roentgenogram of chest. Cardiac enlargement, enlarged pulmonary conus and increased hilar marking.

be physically stronger. A total of eight exchanges were completed between 11:00 p.m. and 7:00 a.m. Nine hundred twenty-five cc. of excess fluid were removed over this eight hour period. Blood chemistries at the end of eight hours revealed a K+ of 4.9 meq/L., Co_2 18 meq/L., BUN 104, creatinine 7.7.

The course of his acute renal failure can be seen in Fig. 2. After the fourth day dialysis was no longer performed between the hours of 10:00 p.m. and 7:00 a.m. Dialysis was continued for seven days. The infant was allowed a free intake of liquid and food, with the dialysis fluid concentration of glucose varied according to the need for water removal.

At no time did he receive parenteral fluids

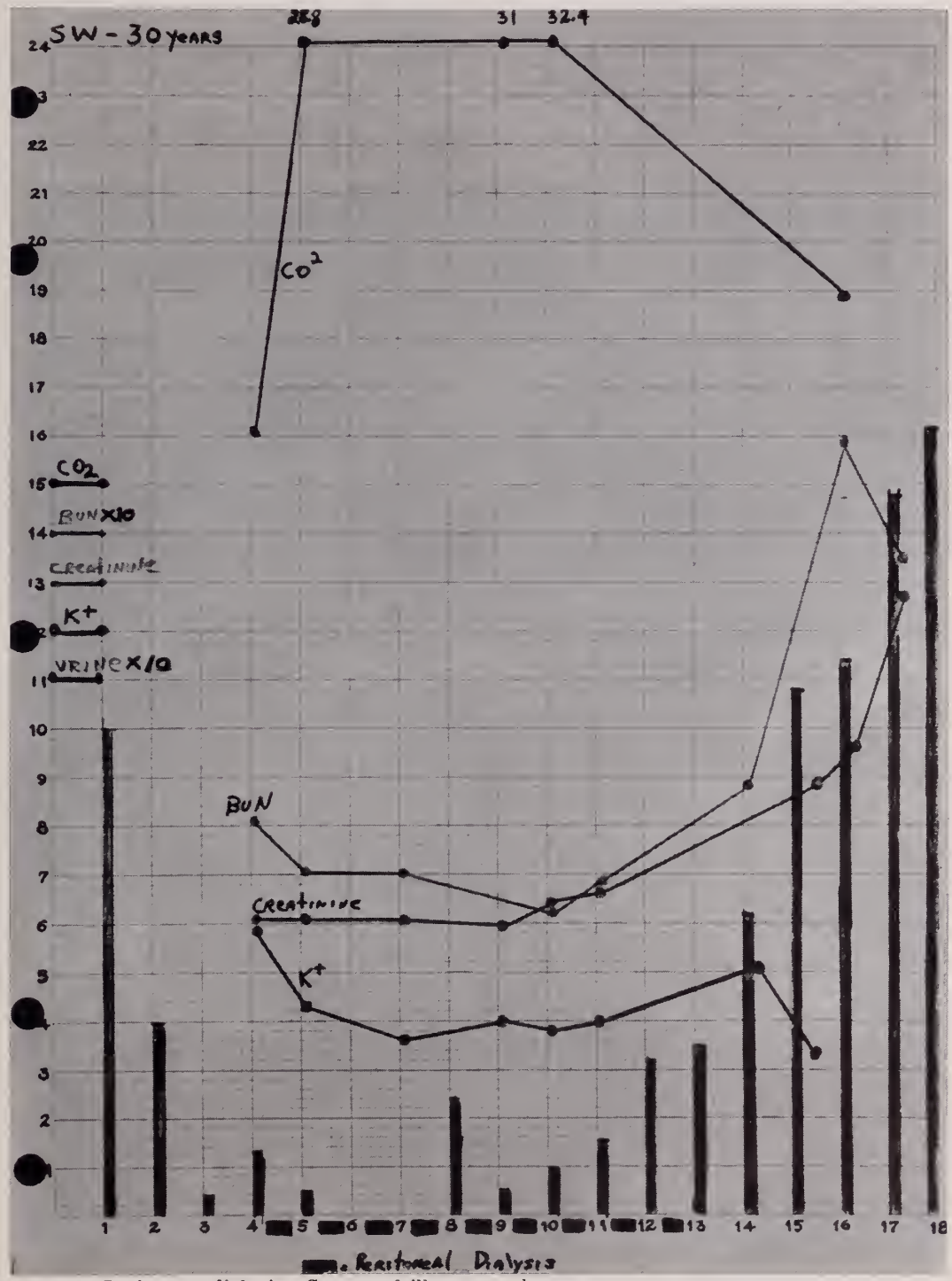


Figure 4. Peritoneal dialysis. Course of illness can be seen.

except prior to the dialysis. For the most part, chemistries were done on the dialysate rather than drawing blood. When blood was drawn, it was almost identical to the dialysis values.

Upon removal of the peritoneal catheter, there was an immediate rise in the BUN and serum K+. This was of short duration, and at present, the infant is perfectly well.

Case No. 2—The second case was a 30 year old white female, BRW. She was admitted two weeks previously to a small hospital because of intractable edema and mild hypertension associated with a seven month gestation twin pregnancy. A Caesarian section delivered two stillborns with hydrops. She received one unit of Rh positive blood and later studies revealed her to be Rh negative. She had received a blood transfusion eight years previously.

The day following surgery she had an output of 1000 cc., the following day 400 cc., and the following day or date of admission to our hospital, 40 cc. Twenty-four hours prior to admission she had received 2000 cc. 5 per cent glucose in distilled water.

Physical examination revealed a well developed, well nourished, edematous and jaundiced white female, who appeared critically ill. She was semi-stuporous and respirations were rapid. Blood pressure was 150/100; heart appeared slightly enlarged and there were a bounding pul-



Figure 5. Roentgenogram (follow-up) after two days of dialysis.

sation and palpable thrill in the second left interspace. P-2 was split, markedly accentuated, and associated with a grade three systolic murmur. No gallop was audible and the heart rate was 90 per minute. Abdomen was distended and bowel sounds were decreased. There was 2+ presacral and pretibial edema. Electrocardiogram revealed early tenting of T waves, otherwise it was normal. Chest roentgenogram (Fig. 3) revealed cardiac enlargement, enlarged pulmonary conus, and increased hilar markings. Urinalysis revealed 4+ albumin and a solid field of white cells. Complete blood picture 10.5 grams hemoglobin; white blood cells 27,000; with 90 per cent neutrophiles, 6 per cent bands, and 4 per cent lymphocytes. Reticulocytes were 3.5 per cent. Bilirubin was 8.29 mgs. per cent with indirect of 5.39 mgs. per cent. Na 132, K 5.9, Cl 85, CO_2 16.2 meq/L. Positive Coombs, BUN 82, creatinine 6.2.

Peritoneal dialysis was started six hours after admission and two hours after consultation. The peritoneal catheter was inserted through the Caesarian incision, which in retrospect is not advisable because of leakage around the tube. A 7 per cent glucose solution was initially used, and she showed considerable improvement while the first dialysis fluid remained in the abdomen. She became able to turn herself and carry on a conversation with her family. This rapidity of improvement was thought related to dialysis of sedation plus relieving cerebral edema.

Over the first twenty-four hours eleven exchanges were carried out and a total of 2.75 liters of excess fluid removed. The course of her illness can be seen in Fig. 4. Follow up roentgenogram after two days of dialysis is seen in Fig. 5. Dialysis was continued for nine days and the patient allowed free intake of fluid and food.

During the first few days of dialysis she had temperature elevation with signs of consolidation in the left base. This was treated with high doses of penicillin instilled into the peritoneal cavity. After three days, peritoneal dialysis was stopped during nights. Upon removal of the catheter, the BUN and creatinine rose, but was falling at time of discharge. Follow up studies revealed a complete recovery.

Both patients experienced mild discomfort with instillation of each dialysis fluid. Although both cases may have recovered with conservative management, their clinical course was much milder and easier to handle. Pneumonia in the second case, was only a minor complication in comparison with what one would have seen in the presence of clinical uremia. Both patients were allowed ambulation as desired.

Summary

Peritoneal dialysis, if used correctly, is a valuable and readily available procedure.

Its advantages are as follows:

1. The procedure can be started quickly.
2. Removal of excess water is easily controlled and accurately determined.
3. Heparinization is not required.
4. Dialysis is carried out in the patient's room.
5. Constant physician observance is usually not required.
6. Donor blood is not required.

Acknowledgment

I would like to express my appreciation to Drs. Harold Levy, James W. Wilson, and William Giddens for the use of their patients.

References

1. Maxwell, M. H., Rockney, R. E., Kleeman, C. R., and Twiss, M. R.: Peritoneal Dialysis. I. Technique and Applications. JAMA 170:917, 1959.

2. Scribner, B. H.: Role of the Artificial Kidney in Management of Acute Renal Failure, Northwest Med. 58:555, 1959.

3. Teschan, P. E., Baxter, C. R., O'Brien, R. F., Freyhof, J. N., and Hall, W. H.: Prophylactic Hemodialysis in Treatment of Acute Renal Failure. Ann. Int. Med. 55:992, 1960.

4. Boen, S. T.: Kinetics of Peritoneal Dialysis: Comparison with Artificial Kidney. Medicine 40:243, 1961.

Discussion

Dr. Meyer Kaplan (New Orleans)—Dr. Muslow has correctly stressed that acute renal failure is a serious life threatening illness.

There is no doubt that the artificial kidney has effected a reduction in the mortality in this disease. However, even when dialysis with the artificial kidney is applied according to classic indications for its use, there continues to be a significant mortality rate in patients whose underlying disease or injury is potentially reversible by treatment or time, provided that the patient can survive the complications of the renal shutdown. Such deaths are usually caused by overhydration, cerebral and pulmonary edema, overwhelming infection, uremic poisoning, and potassium cardiotoxicity. Most of these complications and resulting fatalities are theoretically preventable by the earlier, aggressive application of hemodialysis with the artificial kidney. Unfortunately as Dr. Muslow has stated, the artificial kidney for effective operation requires a well staffed, well trained, well equipped, constantly available medical team. Such facilities are available in only a few large university centers and even here the kidney team frequently suffers from battle fatigue due to case over-

load resulting in procrastination in early application of dialysis, which may have unfortunate consequences for the patient. In other instances as active bleeding or hypotensive states, technical factors may prevent the use of the artificial kidney.

Recently, material for peritoneal dialysis has become available on a commercial scale and has made peritoneal dialysis practical for use even in smaller hospitals. Anyone undertaking to use it should certainly have adequate theoretical knowledge of fluid and electrolyte balance, the uremic state and its management with conservative means. Peritoneal dialysis is technically simpler and less hazardous than hemodialysis with the artificial kidney, and once instituted the fluid exchanges can be maintained by an intelligent, instructed nurse under supervision of the physician whose attendance is not constantly required. It is a procedure that can be initiated quickly in the event of acute emergencies such as pulmonary or cerebral edema or potassium intoxication. It is a safe procedure, the only real hazard being peritonitis which fortunately occurs uncommonly. The contraindications are few being only active intra-abdominal bleeding, or recent extensive intra-abdominal trauma or recent intestinal anastomoses. It has been performed soon after major surgery but there is some increased risk of wound dehiscences. The use of retention sutures is of value in preventing this complication.

Dr. Muslow has proposed that peritoneal dialysis be initiated early in the course of renal failure and continued prophylactically through the course of the illness to maintain the patient free of uremic symptoms and manifestations, the blood chemistries near normal, and to allow free intake of fluid and food by the patient. This is desirable in affording the patient the best conditions for recovery, wound healing and resistance to infection. Certainly the studies by Teschan and Scribner have shown that such aggressive prophylactic dialysis with the artificial kidney has improved survival rates. It is logical to assume that the same improved survival rates could be produced with prophylactic peritoneal dialysis. The possible complication of peritonitis is increased by keeping the intraperitoneal catheter within the abdomen throughout the 2 to 3 weeks course of a typical renal failure. However in most instances this can be prevented or treated by the intraperitoneal instillation of potent antibiotics.

I personally have had no experience with prophylactic dialysis as described in this talk, but instead have preferred to institute brisk peritoneal dialysis, exchanging 30 to 50 liters of fluid over 36 to 48 hours. This nearly always produces significant clinical and chemical improvement. The procedure is then terminated, the catheter removed and the patient managed with classical renal failure regimen of restricted fluids, proteins, salt and potassium. When early to moderate uremic signs and symptoms return or when the BUN approaches 175 mgm. per cent or the potassium rises over 6.5 despite the use of Kayexalete exchange resin, the dialysis is resumed. The incidence of significant peritonitis with this technique is less. I could caution that one should not wait for advanced uremic manifestations or life-threatening biochemical abnormalities to occur before instituting peritoneal dialysis, because it is a longer procedure requiring 1 to 2 days to effect improvement in most cases as compared to 6 to 8 hours with use of the artificial kidney.

In the two cases reported here dialysis was lifesaving. The infant was dying of potassium intoxication and heart failure. Peritoneal dialysis is probably the treatment method of choice in renal failure of infants and small children.

The second case was near death from cerebral edema and heart failure. Peritoneal dialysis using hypertonic dialysis fluids removed the excess water and was responsible for survival.

At Charity Hospital the artificial kidney has been available to us for some years. Our experience with it has been extensive. Recently we have been trying peritoneal dialysis and are pleased with its ease of application, and plan to utilize it more frequently. This also is the trend in other kidney centers. In Boston in 1960, Merrill performed 102 dialyses with the kidney and only 12 peritoneal dialyses. In 1961, the kidney was used 37 times and peritoneal dialyses were used in 121 patients.

I would urge that all hospitals stock materials for peritoneal dialyses for use in emergency situations where no time is available to transfer the patient to a better equipped center. The procedure can be instituted, the clinical courses stabilized, a life possibly saved, and then if desired or needed expert consultants can be secured for continuation of the treatment.



Uric Acid Calculi*

• The author describes the clinical features of uric acid stones in the urinary tract and advises as to treatment. He presents four illustrative case histories.

H. M. YEARWOOD, M. D.
Shreveport

Introduction

THE subject of uric acid calculi is not a new one and the remarks I have to make here will probably not contain information which will be new to many of you, but this is a subject in which I have been interested for several years. I would like to review briefly with you the underlying pathology, comment on some of the basic chemical and physical properties of uric acid calculi and to present several case reports which illustrate interesting and sometimes unusual features of this disease.

Gout is a Metabolic Disturbance

Uric acid calculi occur in patients who have gout, and this disease, although known for many years, is still a rather obscure illness. By definition, gout is a metabolic disturbance of unknown etiology characterized by the accumulation of excessive quantities of uric acid in the blood and tissues. In this disease there is a disturbance in the metabolism of the purine foodstuffs, and the excessive accumulation of uric acid in the blood probably results from an inability of the body to excrete sufficient quantities of this chemical. Although it is known that the metabolic breakdown of the purine occurs in the liver and the excretion of the majority of the resulting uric acid occurs by way of the kidney, the exact mechanism is poorly understood. Hyperuricemia or gout usually manifests itself as a gouty arthritis, but the less common manifestation with which we as urologists are concerned is the formation of crystals or stones of uric acid within the urinary tract.

Characteristics of Uric Acid Stones

The physical and chemical properties of uric acid are of particular importance and I would like to remind you briefly of some of these characteristics which have clinical significance in the diagnosis and management of patients with uric acid stones. First, let me recall to you that uric acid is insoluble in an acid medium and soluble in an alkaline medium. Therefore, uric acid stones occur only in patients in whom the urine is acid and usually occur in patients in whom the urine is consistently and highly acid. Secondly, I would call to your attention that these stones are truly non-opaque on x-ray, and a pure uric acid stone fails to visualize on the plain x-ray film regardless of its size. Physically uric acid stones are yellow, tan, or cream colored and generally they have a smooth, rounded or ovoid shape. The surface of these stones does not present the rough spines which are found in many other types of urinary tract calculi. To me, they resemble a soapstone. Uric acid calculi often tend to be bilateral, since they represent a metabolic disturbance involving the entire body. Thus, when one is confronted with a patient who has clinical evidence of a urinary obstruction without x-ray evidence of an opaque calculus, particularly if the obstruction is bilateral and provided that the urine is strongly acid, one must seriously consider the diagnostic possibility of uric acid calculi. These uric acid calculi may be large stones or they may be a sludge of tiny crystals which causes the obstruction. Such patients usually will show on laboratory examination

* Presented at the meeting of the Mississippi-Louisiana State Urological Societies, Baton Rouge, La., August 17, 1962.

an elevation of the blood uric acid level. Of considerable importance in the management of these patients is the factor already mentioned concerning the solubility of uric acid crystals in an alkaline urine. In many of these patients surgery may be obviated by alkalinization of the urine by the use of intravenous sodium lactate, oral sodium citrate or sodium bicarbonate. Small crystals promptly dissolve under this kind of treatment and larger stones may be dissolved over a period of time by continued use of this regimen. It has been an interesting observation on my part that patients with uric acid calculi frequently do not seem to have the degree of pain usually seen with other types of stones, even though obstruction to one or both ureters may be relatively complete. I am at a loss to explain this phenomenon except on the basis that the smooth stones are less likely to initiate severe ureteral spasm than are the rougher stones of other chemical composition.

Case Reports

Case No. 1: Mrs. L.L.G.—94 year old white female, admitted to the hospital by a general practitioner on 1-29-61, because of the inability to void for the preceding 12 to 18 hours. There had been mild, generalized abdominal pain and the past history revealed that this patient had undergone intermittent attacks of urinary suppression off and on for several months. Symptoms on these occasions had not been severe enough to require medical treatment. On admission, the bladder was found to be empty, the face slightly edematous and the abdomen moderately distended. Plain x-ray film revealed no opaque calculi. At cystoscopy a bilateral hydronephrosis was discovered and there was mild obstruction to passage of a catheter in both right and left ureters. The urine was highly acid, having a pH of 5, and contained a rare pus cell. The BUN was 35 mgm. per cent. Indwelling catheters were left in both kidneys and the urine output through them was satisfactory. On the following day bilateral retrograde pyelo-ureterograms were made and showed incomplete filling of the right kidney pelvis, a rounded filling defect approximately 8 mm. in diameter in the right upper ureter, and multiple small rounded filling defects in the left lower ureter. The following day the BUN had fallen to 10.8 and the blood uric level was 5.85 mgm. per cent. With a diagnosis of bilateral ureteral obstruction due to uric acid stones, a regimen of hydration and alkalinization was carried out, but this elderly patient had a downhill course and expired a few days later. The post mortem examination revealed bilateral hydronephrosis, infected, and bilateral uric acid calculi.

To me this patient illustrates the need for cystoscopy and ureteral catheterization in any patient with anuria, even though there may not be typical ureteral or renal colic and in spite of the fact that the plain x-ray film may fail to reveal opaque calculi. Again it emphasizes the fact that although gout is more prevalent in the male and during middle age, it may still occur in the female sex at the extremes of age.

Case No. 2: Mr. J.E.P.—59 year old white male, was admitted to the hospital by a general practitioner on 8-20-60, with a history of acute right lower quadrant abdominal pain of four hours duration. There were slight nausea and vomiting and physical examination revealed moderate distention and tenderness on the right side of the abdomen. The urine had a pH of 5 and microscopically showed a few red cells and pus cells. The admitting diagnosis was probable urinary calculus, but a plain film of the abdomen failed to reveal any opaque stones, so an investigation for other causes of abdominal pain was carried out. After obtaining negative x-ray studies of the gall bladder and gastrointestinal tract, an intravenous pyelogram was made on the third day of hospitalization. This failed to reveal any concentration of dye in either kidney and on that day I saw the patient in consultation. Upon questioning him carefully, I found that he had been oliguric on that day and that he had developed mild left flank and costovertebral angle pain on that morning. Cystoscopy under general anesthesia revealed an impassable obstruction in both terminal ureters. Repeat cystoscopy under spinal anesthesia the following morning again revealed impassable obstruction in each terminal ureter, so an emergency nephrostomy was performed on the right side. The kidney and ureter were found to be acutely distended and a catheter, passed down the right ureter, again encountered a complete obstruction in the terminal portion. On that day the BUN was 59.6 and the blood uric acid 9.8 mgm. per cent. With a tentative diagnosis of bilateral ureteral obstruction due to uric acid calculi, the patient was begun on a regimen of alkalinization and hydration, and three days later there was spontaneous drainage of urine from the left ureter via the bladder. Antegrade pyeloureterogram, made by injecting the nephrostomy catheter in the right kidney, revealed a small ovoid filling defect in the terminal ureter. Lavage of this ureter with a solution of sodium bicarbonate was carried out for several days; the fill-

ing defect disappeared, and there was spontaneous drainage through the right ureter. Nephrostomy catheter was then removed and the patient had an uneventful convalescence. Follow-up studies six weeks later revealed normal bilateral retrograde pyelo-ureterograms.

This patient again illustrates the need for ureteral catheterization in one suspected of having ureteral obstruction, even though the plain x-ray film fails to demonstrate a calculus. It also demonstrates the fact that hydration and alkalinization may bring about spontaneous dissolution of small stones or crystals and that lavage with stronger alkaline solutions may dissolve stones of greater size. It is my impression that in this case the patient had complete obstruction of the right ureter due to a calculus in its terminal portion, and that when he was hospitalized he became somewhat dehydrated, all of the urinary output was forced upon the left kidney, and that on the third day he developed a sludge of uric acid crystals which obstructed the left lower ureter.

Case No. 3: Mr. E.C.D.—40 year old white male was admitted to the hospital in 1952, because of right ureteral and renal colic. One stone which passed from the right ureter was analyzed and found to be composed entirely of uric acid. Pyelogram revealed a larger, non-opaque, rounded stone approximately 2 cm in diameter in the right renal pelvis. This patient was treated by alkalinization of the urine, using sodium citrate—1 teaspoonful four times daily. We continued this method of treatment for a number of years and he was completely asymptomatic. A pyelogram made seven years later (1959), revealed the kidneys to be entirely normal. I present this case only to demonstrate the efficiency of alkaline therapy in dissolving uric acid calculi.

Case No. 4: J.P.P.—white male infant was hospitalized on numerous occasions during the first few months of his life, because of acute attacks of nausea, vomiting, and what appeared to be abdominal pain. This infant would be screaming with pain and on examination showed evidence of abdominal and flank tenderness. At 4 weeks of age a congenital inguinal hernia was repaired, with no improvement in his symptoms. At 7 weeks of age he developed pyuria and was seen by one of my colleagues (Dr. E. C. St. Martin). At 4 months of age a laparotomy was performed because of continued evidence of abdominal pain. Mild malrotation of the gut was found, a few adhesions were divided, but there was no improvement in the clinical picture. About this time it was noted that during the acute attacks this infant seemed to strain to void and on many occasions passed a large quantity of uric acid crystals in his urine. After passing a sludge of crystals, he would improve rapidly and become asymptomatic. This child was examined twice at Ochsner Clinic in New Orleans and once in Chicago by a group of pediatricians and experts on metabolic diseases and they all agreed that this child had hyperuricemia. On multiple examinations of the blood throughout this period the blood uric acid varied from 3.4 to 12 mgm. per cent. At the present time this child is being maintained on an alkalinization regimen and as long as he can be induced to take sufficient quantities of alkali to keep the urine consistently alkaline, he is asymptomatic.

This case is most interesting, since it is an example of the rare occurrence of gout in a small infant.

Summary

I have discussed briefly the metabolic nature of gout, some of the physical and chemical characteristics of uric acid calculi, and have presented four cases illustrating the clinical aspects of this disease. Again, I would like to emphasize that in any patient who presents the clinical manifestations of a urinary calculus, who has a strongly acid urine, no visible opaque calculi, and an elevated blood uric acid, one must always consider the possibility of uric acid stones.



Clinical Value of Pulmonary Function Testing

• The author explains the clinical value of pulmonary function testing in terms of organ damage and indicates its place in differential diagnosis.

MORTON SOLOMON, M. D.*
New Orleans

MODERN diagnosis and treatment depend upon objective and quantitative methods of determining the function of an organ. It has become important to be able to diagnose the *degree* of impairment caused by a disease or injury.

There is clinical value in simple methods of estimating the efficiency of the respiratory apparatus. For hundreds of years physicians have formed conclusions as to the degree of respiratory failure by physical examination: the position assumed by the patient in bed, the number of pillows required, the rate of respiration, the movement of accessory muscles of respiration and alae nasi, the presence of cyanosis, and other physical signs. In more recent years chest roentgenography made available significant information on the movements of the chest muscles and diaphragm. However, physical signs can only supply a coarse and often unreliable estimate of the degree of respiratory efficiency or failure. There is a critical need for better methods of measuring a patient's respiratory efficiency than by the number of pillows required in bed, the number of steps he can walk before becoming breathless, or the subjective intensity of dyspnea.

Principle

Pulmonary function measurements have value and limitations not unlike other organ function tests, e.g., elevated Bromsulfalein (BSP) retention may indicate abnormality in the liver, and decreased phenolsulfonphthalein (PSP) excretion may indicate impaired kidney efficiency.

Likewise, reduced Total Vital Capacity tends to indicate restrictive or decreased volumetric ventilatory capacity and reduced Maximum Mid-expiratory Flow (MMEF) tends to indicate obstruction to the flow of air through the respiratory passages. Isolated discrete lesions involving the parenchyma of an organ (i.e. minimal pulmonary tuberculosis) usually cannot be detected by functional studies. Although abnormality in the liver, kidney, or lung function does not give a specific etiologic diagnosis a rational differential diagnosis can be formulated on the basis of the pathologic physiology. Further distinctions suggested can be made bacteriologically, histologically, and radiologically.

Value to Physician

Pulmonary function studies can give pertinent clinical information obtainable by no other techniques. By understanding the pathologic physiology of the patient's chronic disease and diagnosing the type of dysfunction and the degree of impairment, the signs and symptoms are more rationally explained; and the doctor is more secure in his ability to handle the clinical problem.

Pulmonary function tests verify the diagnosis of obstructive emphysema when the chest x-ray is normal, and differentiate between asthma and emphysema, cardiac failure and pulmonary failure, primary and secondary polycythemia, anxiety state, and malingering.

Pulmonary function studies are of value to the surgeon in *preoperative evaluation* and in the prediction of the risk and the possibility of survival in the presence of pulmonary insufficiency. Before a pa-

* From the Department of Medicine, Touro Infirmary and Tulane University School of Medicine.

tient is referred to a thoracic surgeon for resection, pulmonary function should be estimated; otherwise, false hopes may be built up in a patient with inadequate pulmonary reserve for a major thoracic operation.

Value to Patients

Pulmonary function studies are of value in assisting in the medical management of thoracic disease. Serial function tests give more reliable information about the progress of the disease than the symptomatic response to "how do you feel today?". Functional studies serve as a basis for *choice of therapy* tailored to the type of physiological impairment. With the help of pulmonary function studies, the application of ineffectual and expensive treatments may be avoided. Incidentally, the patient benefits from the new interest displayed and the added time spent with him.

Pulmonary function studies assist in *disability evaluation* and determination of physical fitness for specific types of work.

During routine physical examination, assessment of the functional state of the lungs is as important as blood pressure measurement and electrocardiographic examination for *early detection of disease.* Pulmonary function studies should be determined in any patient with a disease which may impair ventilatory function. In a patient with dyspnea on exertion a simple evaluation of pulmonary function will usually determine if the lungs are at fault.

Techniques

The great volume of technical papers on respiratory physiology conveys the impression that very expensive and complex laboratory equipment must be available for estimation of lung function, and has discouraged clinical application. Physicians can evaluate pulmonary function in the majority of patients with a simple inexpensive spirometer.

Complete studies may evaluate: (1) lung volume, (2) air flow, (3) gaseous distribution, (4) oxygen, and carbon dioxide exchange across the alveolus. A *reduction in the lung volume* (e.g. Vital Capacity) as an isolated finding is termed restrictive ventilatory defect and is due to replacement, obliteration, compression, or collapse of lung tissue. *Reduction in air flow* (e.g. Maximal Mid-expiratory Flow) indicates either decreased tissue elasticity or bronchospasm.

The Vital Capacity and the Maximal Mid-expiratory Flow may be measured by simple spirometry. *Abnormal distribution* characteristics may be detected by regional inequality on pulmonary fluoroscopy and gaseous washout and dilution tests. *Abnormal gaseous exchange* may be detected by physical or chemical tests of oxygen and carbon dioxide tensions in arterial or capillary blood.[1, 2]

Summary

Pulmonary function testing was perfected for use by the special fields of aviation and submarine medicine, medicolegal determination, and research physiology. The practical value of this information to the practicing physician in relieving symptoms, following exacerbations and remissions of chronic pulmonary disease, and in early detection of asymptomatic disease, has not been appreciated or sufficiently applied.

References

1. Comroe, J. A., Forster II, R. E., Dubois, A. B., Briscoe, W. A., Carlson, E.: The Lung: Clinical Physiology and Pulmonary Function Tests, 2nd Edition, 1962 Year Book Medical Publishers, Inc., 35 East Wacker Dr., Chicago, Illinois.

2. Gordon, B. L.: Clinical Cardiopulmonary Physiology. 2nd Edition 1960, Grune and Stratton, N. Y.

Combined Atropine-Fluoropryl Treatment For Selected Children with Suppression Amblyopia*

• The author describes a chemical method of treating suppression amblyopia in children. The procedure selected is suggested as a possible replacement for the patch.

JOSEPH A. BALDONE, M. D.
Houma

I AM presenting a method for treating unilateral suppression amblyopia for selected children. About three years ago in an attempt to devise a technique for the treatment of suppression amblyopia which would relieve the patient, the parent, and the ophthalmologist of some of the objectionable features of monocular mechanical patching, and in some cases increase the success rate, I began to use a combination of DFP (diisopropylfluorophosphate) and atropine drops.

I am reporting on a series of 30 individuals who were subjected to the DFP-atropine treatment. They ranged in age from 5 to 18 years (22 of them were 10 years or younger). The errors of refraction under cycloplegia in the amblyopic eyes ranged from +0.50 sphere with a +0.50 cylinder to a +6.75 sphere; however, 28 of the patients had +2.00 D.S. or larger errors of refraction.

Method

Essentially the therapy consists of the instillation of one drop of 1 per cent atropine daily (upon arising) in the eye with normal vision. One drop of DFP was used daily in the amblyopic eye upon arising. DFP (Floropryl®) is used in varying strengths (0.1 per cent, 0.05 per cent, 0.025 per cent and 0.01 per cent).

The strength of DFP most commonly used was the 0.025 per cent. The *solution* is available commercially in the strength of 0.1 per cent only (in the ointment form it is available in the 0.025 per cent); however, this solution can be diluted by the pharmacist to the desired strength. Because of the hydroscopic nature of the DFP, the dilution is made with an anhydrous oil such as sesame or peanut oil. I prefer to use sesame oil as peanut oil often becomes rancid.

Selection of Patient

The ideal patient to treat with the DFP-atropine is the bilateral hyperopic patient with suppression amblyopia of one eye. In this type of case the treatment simulates the use of an occluding patch before the good eye and further simulates the use of a correcting spectacle lens before the amblyopic eye. Naturally the higher the hypermetropia of the good eye, the more fogging will result and the more effective will be the therapy.

Physiology of the Procedure

The ciliary spasm and miosis produced by DFP physiologically and mechanically correct to some extent, the refractive error of the eye. The ciliary spasm reduces the amount of hypermetropia; the miosis often reduces the amount of astigmia. The DFP can be used in varying strengths to "refract" the patient. Thus, if a hyperopic eye becomes equally myopic after the use of a certain strength of DFP, then a weaker strength would be substituted until near emmetropia results. The miosis produced by the DFP reduces the refractive error in still another manner. The constriction of the pupil which occurs concomitantly with the cyclo-spasm limits the light rays entering the eye to an area closer to the point where the two major axes of the curvature of the anterior sur-

* Presented at the Eighty-third Annual Meeting of the Louisiana State Medical Society in New Orleans, May 7, 1963.

face of the cornea intersect. The amount of astigmia is therefore reduced because the light rays are limited to the area of the cornea which approaches sphericity.

Results

It was found that in most cases there was no appreciable change in the visual acuity of the amblyopic eye prior to approximately eight weeks of therapy. After the initial visit most of the patients in this series were re-examined in ten weeks. Twenty-six of the thirty patients showed a moderate to marked improvement in visual acuity by the end of ten weeks of therapy. Further improvement in visual acuity was seen in most of the patients at the fourth and sixth month, and in some cases improvement continued for up to twelve months.

Some of the patients in this series had low grade accommodative esotropia which was lessened or abolished, at least during the period of their therapy.

In addition to fogging the vision of the normal eye, the atropine paralyzes the ciliary body and, therefore, eliminates any central stimulation to convergence due to accommodation. The DFP inactivates ocular cholinesterase and thereby puts the ciliary body into spasm which relieves the stimulation to convergence which accommodation would call for. These two factors cause the lessening or abolition of accommodative esotropia which may be present.

A main advantage in this treatment is that the child's cooperation is not solicited but is commanded. The side effects from the DFP have been minimal and this is probably related to the use of relatively weak solution. In only one case was it necessary to discontinue DFP because of the development of iris cysts.

Summary

This treatment is proposed simply to replace the patching procedure which often is objectionable (and sometimes futile) to all concerned in the bilateral hyperopic patient who has a unilateral suppression amblyopia. The course of therapy after the amblyopia has been relieved as much as possible would be the same as one would have elected to do after the conventional patching procedure had performed its maximum function. Ideally this would result in permanent good vision bilaterally, but may offer some usefulness to those oculists who believe in temporarily improving the visual acuity of an amblyopic eye which is mainly due to anisometropia so that a better chance for normal vision may exist in later life should the good eye of a pair be lost.

This form of therapy has not been extensively used to date apparently, however, other groups have reported the use of this or a similar regimen. Phosphline iodide should be just as effective as DFP in this treatment.

Discussion

Shelley R. Gaines, M. D. (New Orleans)—I have not had enough experience with Dr. Baldone's method of treating amblyopia to make any comments about it at this time. I do have a few pretty definite feelings about the amblyopias that will and will not respond to treatment. In a child with amblyopia and squint, with or without a refractive error, where the squint has been present from birth, the prognosis so far as improving vision and getting fusion is poor. I also think in an anisometropia with or without squint the prognosis of improving vision with occlusion and having it hold is poor. Likewise, in a high hyperope with or without squint we cannot expect very much from occlusion. In an eccentric fixation up until now our results have been very poor. I do not know whether or not pleoptics will help us with these people in the future. At the present time, at least, it does not seem to me to be very practical. At the last meeting of the American Academy of Ophthalmology and Otolaryngology in Las Vegas, one of the men who believes in pleoptics suggested that those of us who did not have this service available should keep the poor, or crossed, eye of the eccentric fixer patched over a period of months and if we can get the patient to fix with this eye when the good eye is covered to go ahead and occlude the good eye, but not to do so unless we could get the patient to fix with the crossed eye. I believe that all amblyopic patients should be tried with some form of occlusion. If the patient is of school age I think we should wait until summer vacations before instituting this routine. In the older children I

always tell the parents I do not think the patching will help but that someday a doctor would tell their child that had he seen him at a younger age he might have done something. I think occlusion should be given a reasonable trial and if it does not work it should be abandoned. As the late Dr. James White said, if he had a choice between no fusion or fusion plus a highly neurotic individual, he would settle for no fusion.

As Dr. Baldone has pointed out, the patient who will get the best result from treatment of amblyopia is the individual who was born with straight eyes, and at a very early age (1 to 3 years) develops squint and amblyopia. This patient has hyperopia and if the eyes can be straightened with DFP or glasses, or these plus surgery, he stands a good chance of recovery from his amblyopia and developing fusion.

Shackles . . . Hobbling . . . Collectivism

Our own American profession well can learn the lesson. . . . It is but little more important to maintain the freedom of the medical profession than to insist on the freedom of our hospitals from the shackles of government control, and the hobbling of the pharmaceutical industry by unduly restrictive legislation. In fact, all must be free or all will be subjected to collectivism. We should be as watchful for any significant signs of surrender to government pressures on the part of the American Hospital Association and the Pharmaceutical Manufacturers Association, as we are for the safety of our own freedom; and we should fight as hard for their freedom as we do for our own.—Editorial in **Nebraska State Medical Journal**, Jan. 1963.

The Journal of the Louisiana State Medical Society

Established 1844

Published by The Journal of the Louisiana State Medical Society, Inc. under the jurisdiction of the following named Journal Committee:

George H. Hauser, M. D., Ex-Officio
J. E. Knighton, M. D., Chairman
Sam Hobson, M. D., Secretary
A. V. Friedrichs, M. D.
H. H. Hardy, Jr., M. D.
M. D. Paine, Jr., M. D.

EDITORIAL STAFF

PHILIP H. JONES, M. D., Editor

COLLABORATORS—COUNCILORS

Nicholas J. Chetta, M. D.
J. E. Clayton, M. D.
Guy R. Jones, M. D.
C. E. Boyd, M. D.
Frederick A. Marx, M. D.
John L. Beven, M. D.
J. Y. Garber, M. D.
R. E. C. Miller, M. D.

C. GRENES COLE, M. D., General Manager
1430 Tulane Avenue

Subscription Terms: $4.00 per year in advance, postage paid, for the United States; $5.00 per year for all foreign countries belonging to the Postal Union.

News material for publication should be received not later than the eighteenth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

Manuscripts should be addressed to the Editor, 1430 Tulane Ave., New Orleans, La.

The Journal does not hold itself responsible for statements made by any contributor.

Editorial

Permanent Physical Impairment, Permanent Disability and the Physician

About two-thirds of the lawsuits in this country coming to trial involve the testimony of the physician. More than one half of these are concerned with the matter of what permanent effect the disease or injury has had upon the patient. Decisions with reference to these matters have long been recognized as important and complex. The opinions expressed in court by physicians who are equally competent may show substantial differences, and may appear to be in complete opposition. Explaining these variances, it is said that many such conflicts and opinions are the result of differences in viewpoint. "In the past much confusion has resulted from inadequate understanding by physicians and others of (a) the scope of medical responsibility in the evaluation of permanent disability and (b) the difference between permanent disability and permanent impairment."

The proper role of the physician in the evaluation of permanent disability under any private or public program for the disabled is a matter of vital importance. It is just as necessary for him to have authoritative material to assist him in competently fulfilling his responsibility, which is the evaluation of permanent impairment. To this end the American Medical Association has set up the Committee on Medical Rating of Physical Impairment. The Committee has authorized publication of five guides to the evaluation of permanent impairment. This series has been published in the Journal of the American Medical Association covering the following systems: extremities and back, February 15, 1958; visual systems, September 27, 1958, cardiovascular system, March 5, 1960; ear, nose, throat, and related structures, August 19, 1961; and central nervous system, July 6, 1963.

Studying these guides the physician is able to perceive the important distinction between permanent impairment and permanent disability. Permanent impairment is a purely medical condition. It has been defined as "any anatomic or functional abnormality or loss after maximum medical rehabilitation has been achieved and

which abnormality or loss the physician considers stable or non-progressive at the time the evaluation is made". Permanent impairment is of necessity basic consideration in the evaluation of permanent disability. It contributes to but does not necessarily indicate the extent of a patient's permanent disability. Permanent disability, it is explained, is not a purely medical condition. It is an administrative responsibility and function. It is a state of the individual resulting from the impact of his impairment upon such non-medical factors as age, sex, education, economic and social environment. Permanent disability exists when the patient's actual or presumed capacity to engage in gainful occupation is reduced or absent as a result of the impact of permanent impairment upon the non-medical factors mentioned. The non-medical factors have not been measured satisfactorily. Consequently, permanent impairment is seized upon frequently as the sole or real criterion of permanent disability. Evaluation or rating of permanent impairment is the function that physicians alone are competent to perform. It is an appraisal of the patient's situation as affected by his illness or injury.

The patient's personal efficiency in the activities of daily living is the consideration requiring appraisal. The Committee lists the activities as self care, communication, normal living postures, ambulation, elevation, traveling, and non-specialized hand activities. It is clear from the study of these guides that confusion and dispute would be materially lessened if physicians realized it is not their duty to evaluate the social and economic effects of permanent impairment. These must be evaluated by the administrators who make determinations of permanent disability. The guides state that permanent impairment cannot vary because of the circumstances of its occurrence, and that unlike disability, permanent impairment can be measured with reasonable degree of accuracy and uniformity on the basis of impaired function. This is evidenced by loss of structural integrity, pathology, or pain substantiated by clinical findings. The Committee recognizes that two or more impairments may be involved in a single individual. A combined values table is provided by which any combination of impairments may be found. This concept is based on the principle that each impairment acts not on the whole, but on the portion which remains after the preceding impairment has acted.

The physician finds himself day by day in the position of making decisions of impairment and disability at the same time. The majority of these are concerned with temporary illness and the patient's ability to function. The certificates furnished for insurance and similar benefits are examples of these. Any such document the physician signs can become the basis of legal action in this field in the future.

The parties who are interested in securing the certificates for insurance benefits of a temporary nature frequently need similar documents to support their claim of permanent entitlement. The physician is then called upon to certify as to impairment and as to disability in the same sentence. When such a statement is questioned in court, another physician may logically take the view that a certain degree of permanent impairment does not carry with it a similar degree of permanent disability. In such a manner, confusion is spread. The physician would be well advised to separate clearly permanent impairment and permanent disability.

The Committee on the Medical Rating of Physical Impairment has done an immense service to the profession in the production of these guides. It is to be hoped that they will be put to proper use by all concerned.

ORGANIZATION SECTION

The Executive Committee dedicates this section to the members of the Louisiana State Medical Society, feeling that a proper discussion of salient issues will contribute to the understanding and fortification of our Society.

An informed profession should be a wise one.

IMPORTANT ELECTION COMING UP

On Saturday, December 7, Louisiana citizens will go to the polls to select the Democratic candidates for governor, the various statewide offices, the Legislature and many, many important parish and local offices. In January the top candidates will face each other in the second primary.

Every office, and the individual serving the office, is important. People frequently complain about the calibre of government, but often forget that the people we elect determine the kind of government we are to have and how our tax money is to be spent.

As good citizens, it is our duty and responsibility to take an interest in all elections. We should talk to the candidates and exchange views with them. It is much more important to talk to the candidates before an election than after the election.

Because a physician earns more than the average citizen, he pays a larger share of the tax dollar. This being the case, physicians should take a vital interest in how those elected to office spend our tax dollars.

Those we elect will not only decide on the kind of government we are to have, but the amount of government we are to have. They will determine the amounts to be spent on health, education, roads and many other vital services.

Those we elect, or do not elect, by not going to the polls, will also decide on many vital issues directly affecting the medical profession. For instance, they will decide on the extent of Kerr-Mills care we are to have in Louisiana and whether our state grants legal recognition to chiropractors.

An election presents the only real opportunity citizens have to voice approval or disapproval of the kind of government they are getting. More and more elections and issues are being decided on the basis of a handful of votes. Don't ever believe that your single vote does not count.

The time to talk to the candidates is now. And above all, vote for the candidates of your choice on December 7 and in the other forthcoming elections.

THE GROWING NUMBER OF ELDERS

The following facts were taken from the statistics furnished by the Metropolitan Life Insurance Company.

The number of people at ages 65 and over in the United States continues to grow rapidly, reaching a record high of 17⅔ million in July of this year, a gain of one million since the 1960 Census. It is expected that they will total 20 million in 1970 and may number about 24½ million by 1980.

The elders have been increasing at a greater rate than the population as a whole, despite the large numbers of children born since the close of World War II. The proportion of the total population that is 65 and over has risen from 8.1 percent in 1950 to 9.3 percent at present, and will probably reach 10 percent by 1980.

The increments to the population at ages 65 and over have been greater for women than for men. This is due largely to the fact that females have the higher survival rate at every period of life. Currently, there are 9⅘ million women at the older ages, or 2 million more than men; by 1980 it is likely that the excess will be as much as 3⅘ million. This means that the sex ratio at ages 65 and over will increase from 125 women per 100 men to 137 per 100.

In the years immediately ahead, the growth of the older population will continue to be most rapid at the more advanced ages, i.e., at 75 and over. Between 1960 and 1970 the number of men is expected to increase 7 per cent at ages 65-74 and by no less than 30 per cent at ages 75 and over. Men in the latter age group will probably comprise over 36 per cent of all men at ages 65 and over in 1970, compared with 32 per cent in 1960. Among the women, the proportion of elders that are in the age group 75 and over is likely to increase from 35 to 40 per cent.

Every state, without exception, reported more people aged 65 and over at the time of the 1960 census than it had 10 years earlier. However, the rate of growth during the decade varied considerably from one area of the country to another. Florida recorded the largest relative increase, 133 per cent—from 237,000 in 1950 to 553,000 in 1960. In Arizona, the older population doubled, and in Nevada, New Mexico, and California the increase exceeded 50 per cent. In California the gain amounted to almost half a million persons, the state's total reaching 1,376,000 in 1960. Only New York had a greater number of older people, namely, 1,688,000.

Widowhood is much more likely for women than for men at the older ages. A little over half of the women at ages 65 and over are

widowed, compared with one fifth of the men. At ages 75 and over the proportions are about two thirds and one third, respectively. Two major factors account for this sex difference in the frequency of widowhood. Age for age, the death rate is higher for men than for women; moreover, in most families the husband is several years older than his wife.

A considerable majority of older people live in households of their own. About 5 out of every 6 men at ages 65 and over are heads of a household. Although the proportion decreases with advance in age, it still is 3 out of every 4 at ages 75 and over. Even at these advanced ages, at least half of the men maintain a household together with their spouse.

One third of the women at ages 65 and over are members of their husband's household; in addition, a little over a third of the women are themselves the head of a household, many of them being widows. Women, moreover, have a greater tendency than men to move in with relatives. Whereas 22 per cent of the women live under such arrangement, only 10 per cent of the men do so.

In 1960, more than 2 million of the men at ages 65 and over—nearly 3 out of every 10—were gainfully employed. The proportion decreases rapidly in successive age groups, from a little over 40 per cent at ages 65-69 to 15 per cent at ages 75 and over. Of all the employed men at ages 65 and over, one fifth were engaged in farming, an additional fifth were in professional or managerial work, one seventh were skilled workers and about one tenth service workers. Relatively few of the older women were employed, and of these one third were service workers.

MAJOR MEDICAL COVERAGE GROWS

Nearly 64 of every 100 persons acquiring group health insurance coverage this year are gaining protection against major medical expenses, the Health Insurance Institute reports.

The Institute's 1963 survey of new group policies showed continued high interest in major medical expense insurance, which helps pay for virtually all types of medical treatment both in and out of hospital.

About 28 per cent of the population which is covered by health insurance now has major medical. This figure has been increasing in recent years. In every year since 1960, more than 60 per cent of the new coverages written have contained major medical provisions.

Analysis of the survey also shows a significant trend in types of major medical coverage.

Over the past four years, "supplementary" major medical has gained an increasing share of the market in contrast to "comprehensive" major medical.

In 1960, 63 per cent of the new group major medical policies were of the supplementary type. This year, supplementary accounted for 89 per cent. Prior to 1960 the trend had been toward comprehensive.

Supplementary major medical insurance acts as an extension of basic hospital and surgical plans. Comprehensive major medical provides both basic hospital-surgical protection and extended health care benefits. Both have high maximums ranging from $5,000 to $20,000 or more for an accident or illness.

The trend toward the supplementary type apparently reflects the preference of group policyholders to add major medical to existing plans rather than completely revising their programs, the institute said.

As of June 30, 1963, major medical policies written by insurance companies covered 40 million of the estimated 143 million persons in the United States with some form of health insurance.

DR. THOMAS INSTALLED PRESIDENT AMERICAN RHINOLOGIC SOCIETY

Dr. H. Ashton Thomas was installed as President of the American Rhinologic Society at its annual meeting held at the Americana Hotel, New York on October 20. This is a well deserved honor for Dr. Thomas. He has actively participated in the deliberations of this society for many years and has merited this recognition.

PUBLIC HEALTH SPENDING INCREASED

Federal, state and local governments increased their spending on health and medical programs in 1962-63 by nearly 10 per cent over the previous year, according to preliminary estimates by the Social Security Administration.

The Administration estimated that $7.68 billion in taxes went for health care programs—not counting costs of medical-facilities construction—in the year ending June 30, 1963.

In the fiscal year 1961-62, the tax outlay for health purposes was $7 billion. In 1949-50, the public expenditures amounted to $2.5 billion.

In spite of these facts, the "Do-Gooders" including President Kennedy are supporting the King-Anderson Legislation, which Bill, if enacted into law would add an additional six billion dollars to the already bankrupted social service department of our Government, and it would further require our citizens to pay higher and higher taxes to support such a socialized medical program. Of course, the supporters of this legislation now realize that, in naming this bill the "Medicare Bill" they made a serious political mistake, and are now hedging by trying to publicize it as a "Hospital Bill" which it really is,

since, for all practical purposes, only hospital expenses are provided for our older (65 years and over) citizens.

We should, as doctors and citizens of this state do everything possible to defeat H.R. 3920 known as the King-Anderson Bill. Our members and their friends and patients should let our Senators and Congressmen know by letter, post card, phone, or personal contact that they are unalterably opposed to this legislation, and the sooner this is done the better it will be for our citizens and ourselves. Don't be put in the class of supporting this bill by neglecting to oppose it. Your inaction will surely aid its passage.

Won't you please help us defeat this legislation which is bad for all of our people—laymen and physicians alike.

MEDICAL NEWS SECTION

CALENDAR

PARISH AND DISTRICT MEDICAL SOCIETY MEETINGS

Society	Date	Place
Ascension	Third Tuesday of every month	
Calcasieu	Fourth Tuesday of every other month	Lake Charles
East Baton Rouge	Second Tuesday of every month	Baton Rouge
Jefferson	Third Thursday of every month	
Lafayette	Second Tuesday of every month	Lafayette
Lafourche	Last Tuesday of every other month	
Morehouse	Third Tuesday of every month	Bastrop
Natchitoches	Second Tuesday of every month	
Orleans	Second Monday of every month	New Orleans
Ouachita	First Thursday of every month	Monroe
Rapides	First Monday of every month	Alexandria
Sabine	First Wednesday of every month	
Tangipahoa	Second and fourth Thursdays of every month	Independence
Second District	Third Thursday of every month	
Shreveport	First Tuesday of every month	Shreveport
Vernon	First Thursday of every month	

POSTGRADUATE COURSE IN RECONSTRUCTIVE SURGERY

An international postgraduate course in "Introduction to Fundamentals of Reconstructive Surgery of the Nasal Septum and External Pyramid" will be presented at the University of Cincinnati College of Medicine and Christ Hospital, Cincinnati, May 5-15, 1964.

The course coordinator will be Dr. Raymond L. Hilsinger, Assistant Professor of Otorhinolaryngology, University of Cincinnati. Dr. Maurice H. Cottle, Professor of Otorhinolaryngology, Chicago Medical School, and the American Rhinologic Society will cooperate in the presentation.

Further information may be obtained from Dr. Raymond L. Hilsinger, 2403 Auburn Avenue, Cincinnati 19, or American Rhinologic Society, 530 Hawthorne Place, Chicago 57.

PROGRAMS ABROAD WILL BE REPORTED

Officers and staff members of more than 100 agencies and organizations which are operating medical programs abroad are being invited to the Second American Medical Association Conference on International Health Oct. 30-31 at the Water Tower Inn in Chicago, Ill.

Among the conference speakers will be Paul Dudley White, M. D., Boston, who will talk on **Future Priorities in International Medical Research**, and former Congressman Walter Judd, M. D., who will discuss worldwide medical needs. Dr. Judd was a medical missionary in China prior to his many years in Congress, where he served on the Foreign Affairs Committee.

Purpose of the Conference is "to delineate programs and future projects of U. S. organizations engaged in international health activities; to ascertain how American medicine can assume a larger role in solving world health problems and to raise medical standards worldwide; and to relate programs of various voluntary and governmental agencies in order to develop areas of mutual cooperation."

International medical education, the U. S. Agency for International Development program, acute problems in world health and U. S. voluntary international medical care programs will be some of the topics discussed. Some additional program participants will be Harry S. Gear, M.D., secretary general of the World Medical Assn.; G. Halsey Hunt, M. D., executive director of the Educational Council for Foreign Medical Gradu-

ates; Edward C. Rosenow, Jr., M. D., executive director of the American College of Physicians; Kelly West, M. D., of the U. of Oklahoma School of Medicine; Joseph Gallagher, M. D., medical director of the Peace Corps; James B. Watt, M. D., chief of the Public Health Service's Division of International Health, and John T. Connor, president of Merck & Co., Rahway, N. J., and board member of the People-to-People Health Foundation.

LOCAL SURGEON TO ATTEND AMA CONFERENCE ON INTERNATIONAL HEALTH

Dr. G. N. Weiss, local surgeon, has been asked to attend the second American Medical Association Conference on International Health to be held in Chicago, Illinois October 30 and 31. As a result of Dr. Weiss' experience during his visit and surgical contribution to the Central American country of British Honduras in 1962, he has been asked to give his "grass roots" opinion on the role American Medicine can play in raising medical standards worldwide. Many prominent national and international health personnel will be in attendance and contribute to the program and seminar. Dean William Frye of the L.S.U. School of Medicine, members of the Peace Corps, representatives from the American Red Cross and professional and non-professional members of American industry and international health teams will also be in attendance. It is anticipated that the U. S. Foreign Policy role implementing the Health-For-Peace program will be discussed.

1964 MEETING SOUTHEASTERN SURGICAL CONGRESS

The 1964 meeting of the Southeastern Surgical Congress will be held on the S. S. HANSEATIC. The cruise will begin March 21, sailing from Port Everglades (Fort Lauderdale), Florida, returning to the same port on March 28. Stops included will be St. Thomas, San Juan and Nassau. For further information write to the Secretary-Director, Dr. A. H. Letton, 340 Boulevard N. E., Atlanta 12, Ga.

SCHOLARSHIP AVAILABLE

The shortage of well-trained librarians and information specialists in the biomedical sciences is acute. Medical schools, hospitals, pharmaceutical firms, medical societies, and research institutes must have qualified personnel to organize, administer, and make readily available the literature and information resources in the field.

In 1964, the Medical Library Association will offer the Marion Dondale Scholarship in the amount of $1,000 to assist a student showing promise for medical librarianship to attend any American Library Association accredited library school. Funds are available for a student entering library school in either the summer or fall terms.

The applicant must be under 30 years of age, and hold a bachelor's degree, preferably in one of the life sciences, or chemistry, anthropology, psychology, geology, mathematics, or physics. A minimum requirement is 15 semester units or their equivalent drawn from the above fields. In addition, applicants will be considered on the basis of strong foreign language background, high scholastic record, and the intent to enter the medical library field.

Selection will be made by the Medical Library Association's Committee on Standards. Unless distance is prohibitive, scholarship candidates will be asked to have a personal interview with a medical librarian in his area. The deadline for accepting applications is March 1, 1964. Application forms are available from any A.L.A. accredited library school.

TEXAS INTERNISTS TO HOLD MEETING IN SAN ANTONIO

A regional meeting of specialists in internal medicine will be held December 15, 1963, at the St. Anthony Hotel, San Antonio.

The session is one of the postgraduate education activities of the American College of Physicians—an international medical organization which represents more than 11,600 specialists in internal medicine and related fields.

Aimed at providing practicing internists in the Texas area with current information on their specialty, the regional meeting will stress newer aspects in the treatment of diseases.

Special guests will include Thomas M. Durant, M. D., Philadelphia, Pa., President-elect of the American College of Physicians, and Chairman of the Department of Medicine at Temple University School of Medicine; and Edward C. Rosenow, Jr., M. D., Philadelphia, Pa., Executive Director of the College.

Dr. Hatch W. Cummings, Jr., Houston, College representative for Texas, is in general charge of the meeting. Dr. W. W. Bondurant, Jr., San Antonio, is Chairman of the Arrangements-Program Committee.

THE AMERICAN COLLEGE OF PHYSICIANS ANNOUNCES CHANGE IN POSTGRADUATE COURSE DETAILS

The American College of Physicians has announced changes in arrangements affecting two of its 1963-64 Postgraduate Courses.

Two Courses have been redesignated in number (due to a change in dates for one Course). **Recent Advances in Clinical Nutrition,** which will be held at Lemuel Shattuck Hospital, Boston,

Mass., June 1-5, 1964, is now Course No. 17. **Recent Progress in Endocrinology** is now Course No. 18.

Dates for **Recent Progress in Endocrinology** have been changed from May 25-29, 1964, to June 8-12, 1964. The newly-designated Course No. 18 will be held at the same location—University of Washington School of Medicine, Seattle, Wash.

The 1963-64 Postgraduate Courses are part of the continuing postgraduate education activities of The American College of Physicians, which represents more than 11,600 internists and specialists in related fields.

BOOK REVIEWS

A Manual of Diabetes for the House Officer; by William T. Nunes, C. C Thomas, 1963, 91 pp. $5.00.

A Manual of Diabetes for the House Officer, despite its brevity (91 pp.) is a thorough, up-to-date moncgraph on the management of diabetes mellitus. The book serves as an easily accessible source of information. It is sufficiently detailed for everyday use.

The author presents the cardinal features of the disease which can be diagnosed by office or general hospital routine. Some clinicians will probably disagree with Dr. Nunes' somewhat unorthodox classification of diabetic patients; nevertheless, his therapeutic use of insulin in the various cases is acceptable. The reviewer agrees with the author's reluctance in advocating the use of oral hypoglycemic agents. The treatment of hypoglycemic reactions and ketoacidosis follows the generally accepted pattern. There are some practical hints with regard to surgery, pregnancy, obesity, etc., but these could be more extensive.

The book is written in an easily readable and even entertaining style.

KAROLY G. PINTER, M. D., Ph.D.

Synopsis of Pediatrics; by James G. Hughes, St. Louis, Missouri, C. V. Mosby, 1963, 1031 pp. $9.85.

The twenty-five chapters of this book systematically cover all aspects of pediatrics. The first three chapters, devoted to the scope of pediatrics and to a relatively detailed discussion of growth and development, physical and emotional, are among the best in the book. Indeed the chapter on Psychologic Aspects of Childhood is one of the best anywhere. Fluid and electrolyte problems and their management are presented in an extremely simple and practical fashion. The ensuing chapters present, often in tabular form, the signs and symptoms of all kinds of poisonings, the physiologic peculiarities of the newborn, the latest on liver disease in childhood, the relation of the newest viral agents to respiratory infections, the dosage of all digitalis preparations and diuretics in children; the abnormal hemoglobins and the coagulation factors; the chromosome patterns found in abnormal sex differentiation. Useful chapters on pediatric orthopedics, ophthalmology and surgery round out the book, which ends up with appendices on blood chemical values in children and drug dosage for children.

Less outstanding are the chapters on immunization and infectious diseases. Since the Synopsis is the result of teamwork among the members of the Department of Pediatrics at the University of Tennessee, and since that Department includes no one with a special interest in infectious processes, this weakness is perhaps inevitable.

As the author mentions in his preface, this is indeed a "hypertrophied synopsis," hypertrophied almost to the point of becoming a real textbook. The inclusion of a few illustrations and a few references enhance that tendency. The inclusion in tabular form of so much recent information is what really makes the book earn its title. The early chapters on development of children and the synoptic tables will make it of immense value, particularly to general practitioners with an interest in children, and to medical students.

MARGARET H. D. SMITH, M. D.

Diagnosis and Management of Pain Syndromes; by Bernard E. Finnison, Saunders, 1962, 261 pp. $8.50.

This book of 261 pages was written by a practicing neurosurgeon to present the diagnosis and treatment of pain as a primary entity. The book briefly covers the organic mechanism and psychodynamics of pain followed by a presentation of the many types of pain including neuralgia, headaches, ruptured discs, visceral pain and reflex dystrophy. It is not an outline of differential diagnosis of pain syndromes based on etiology but rather a discussion of pain as an entity.

The pharmacology of drug therapy is considered with a rather superficial discussion of spe-

cific drugs and other side effects. Nerve blocks with a brief outline of techniques are discussed where the author thinks they are helpful.

Surgical procedures for relief of pain are discussed with techniques and indications. Complications of these procedures are conspicuously missing from the discussion. Detailed analyses of results, the relative merit of different procedures, less well-known procedures, and more difficult procedures are omitted and controversial points are not belabored. Illustrations in the form of drawings are generously provided with each procedure.

The book accomplishes in limited form the diagnosis of pain syndromes seen by the neurosurgeon and the author's approach to these problems. The material is not detailed enough for use by neurosurgeons or neurosurgery residents but would be helpful to medical students or physicians in other fields who are required to handle patients with pain problems.

D. E. RICHARDSON, M. D.

Endocrine and Metabolic Aspects of Gynecology; by Joseph Rogers, M. D., W. B. Saunders Co., Philadelphia and London, 189 pages with illustrations and tables. $8.00.

This book written by Doctor Rogers, Professor of Medicine, deals adequately with the problems of endocrinology and metabolism encountered in obstetrics and gynecology. As one might expect there is a paucity of clinical material and case reports. However, the book in its basic design is that of 12 short chapters each of which is devoted to a separate process. These chapters are presented in a clear, concise manner starting with the basic concept and briefly expanding upon it. The chapters on chromosomal aberrations and gonadal defects and amenorrhea are exceptionally informative and modern theories are prevalent. In these chapters the illustrations and charts are very useful and well planned.

This book is a welcomed addition to the present difficult problem of presenting adequate yet concise information on gynecological endocrinology. It is recommended as a review for all obstetric and gynecological specialists and should be required reading for medical students.

JOHN K. ABIDE, M. D.

Ultramicro Methods for Clinical Laboratories (Second Edition); by Edward Knights, M. D., Roderick MacDonald, Ph.D., and Jaan Plompu, Grune & Stratton, 1962. 213 pp. $6.75.

While I have had no personal experience with techniques of ultramicro methods, perusal of this text indicates that it would be extremely valuable to anyone contemplating or engaged in work with ultramicro techniques.

In the second edition of this book, the first text written specifically on the use of ultramicro methods in the clinical laboratory, the authors present a concise and intelligible discussion of the problems, advantages, and equipment involved in ultramicro methodology, as well as a rather extensive bibliography. The remainder of the book is devoted to specific detailed procedures for the more frequently requested tests such as amylase, bilirubin, calcium, carbon dioxide combining power, chlorides, cholesterol, glucose, icterus index, non-protein nitrogen, inorganic phosphorus, acid and alkaline phosphatase, serum proteins, urea nitrogen and uric acid. The authors also frankly admit the pitfalls involved in undertaking the use of ultramicro techniques without proper equipment or personnel adequately trained in its use.

The interest in accurate methodology involving small quantities of specimens has been stimulated by the tremendous growth of clinical chemistry, particularly as applied to pediatric practice, by the necessity of frequent and multiple sampling, and in cases where superficial veins are not adequate for large amounts of blood. This need should make this text a valuable addition to the library of any clinical laboratory.

G. J. VON LANGERMANN, M. D.

PUBLICATIONS RECEIVED

(Certain ones of these will be selected for review)

McGraw-Hill Book Co., N. Y.: The Thyroid and Its Diseases, by James H. Means, M. D., Leslie J. DeGroot, M. D., and John B. Stanbury, M. D. (3rd edit.): Mechanisms of Demyelination, edited by Augustus S. Rose, M. D. and Carl M. Pearson, M. D.,

Charles C Thomas, Publisher, Springfield, Ill.: The Biochemical Diagnosis of Heart Disease, by Clarence M. Agress, M. D. and Harley M. Estrin, M. D.

W. B. SAUNDERS COMPANY features the following new books in their full page advertisement appearing elsewhere in this issue:

ATOMIC ENERGY ENCYCLOPEDIA OF THE LIFE SCIENCES—Edited by C. W. Shilling

A unique new volume for those seeking general information on applications and effects of atomic energy in the fields of medicine, biology and agriculture.

CURRENT PEDIATRIC THERAPY—Edited by Gellis and Kagan

This new book gives you the best treatments, currently in use by leading authorities, for over 300 diseases and disorders that afflict children.

INDEX TO VOLUME ONE HUNDRED AND FIFTEEN

January, 1963—December, 1963

SUBJECT INDEX

A

ADOLESCENCE
gallbladder disease, passibility in young, (Kopsinaw) 96
ADRENOGENITAL SYNDROME
gynecalagical aspects, cangenital pseudohermaphraditism, (Barclay and Dingman) 4
AIR POLLUTION
osthma, N.O., epidemic studies in, (Lewis) 300
ALLERGY
relotive clinicol significonce of food allergies in pediotric allergy, (Hensel) 128
AMBLYOPIA
combined Atropine-Fluoropryl treatment far selected children with suppression omblyopio, (Baldane) 420
AMERICAN MEDICAL POLITICAL ACTION COMMITTEE (AMPAC)
effective 70 per cent in notionol campaign, 25-E
support urged, 357-E
workings ore explained with stote PACS function, (Adoms) 259
ANTIBIOTICS: See olso Penicillin, Streptomycin, Mognamycin
evoluotion of griseofulvin ofter four yeors, (Derbes and Friedmon) 276
pulmonory inforction partiolly mosked by ontibiotic theropy, (Greenberg) 201
ANTICHOLINERGIC DRUGS
double blind study with odded sedative, (Roach) 136
ANTICOAGULANTS
use in recurrent pulmonory inforctions, (Greenberg) 201
ANTIHYPERTENSIVE AGENTS
theropy, (Leckert) 80
therapy, (Martinez-Lopez) 75
ARTERIES
technique ligoting anomolous ortery from pulmonary, (Reynalds) 196
ASCITES
pathogenesis and surgical treotment, (Madden) 157
ASTHMA
epidemic, New Orleons, (Lewis) 300
present status of gammo globulin therapy for osthmatic children, (Thomas and McGovern) 270
ATMOSPHERIC PRESSURE
pulmonary edema, 247-E
AUTOMOBILES
intestinol perforation and fociol fractures in an auto accident victim weoring o seot belt, (Aiken) 235

B

BIOPSIES
in dentistry for possible molignancies, (Rawe) 211
prostote, (Geissler and others) 174

BOOK REVIEWS

Adriani, John, The Chemistry ond Physics of Anesthesio, 107
Adler, Francis Heed, Textbook of Ophtholmalogy, 72
Atlos of Heod ond Neck Surgery, (Lore) 153
Backus, Henry, Gostroenterology, 256
Bronchiol Asthmo, Its Diagnosis ond Treotment, (Rowe and Rowe) 328
Burch, George E., and De Pasquole, Nicholas P., Primer of Clinicol Meosurements of Blood Pressure, 107
Burch, George E., Primer of Cordiology, 288
Burnet, Sir MocFarlane, The Clonal Selection Theory of Acquired Immunity, 32
Buxton, C. Lee, Study of Psychophysicol Methads far Relief of Childbirth Pain, 152
Contarow, Abrohom ond Trumper, Mox, Clinical Biochemistry, 224
Cerebrol Vosculor Diseoses, Third Conference, 108
Chemistry ond Physics of Anesthesio, (Adriani) 107
Clark, Morguerite, Medicine Today; A Report on A Decade of Progress, 31
Clinicol Biochemistry, (Contarow ond Trumper) 224
Clinicol Exominotions in Neurology, (Moyo Clinic ond Moyo Foundotion) 364
Clinicol Obstetrics, (Tenny ond Little) 153
Clinical Pathology, Application ond Interpretatian, (Wells) 154
Clonol Selection Theory of Acquired Immunity, (Burnet) 32
Cootes, J. B. Jr., Surgery in World Wor II, 398
Coates, J. B. Jr., Waund Ballistics in World Wor II, 399
Cole, Warren, H., McDonald, M.S., Raberts, Stuart S., and Southwick, Horry W., Dissemination of Concer: Prevention ond Therapy, 328
Coronory Heart Disease, The Seventh Hahnemonn Symposium, ed., (Likoff, and Mayer) 258
Cosmetic Chemistry for Dermotalogists, (Klormonn) 257
Cutting, Windsor C., Handbook of Pharmocology; the Actions and Uses of Drugs, 156
Dermatoses Due to Enviranmental ond Physicol Foctors, (Rees) (ed.) 257
Diabetes Mellitus in the Tropics, (Tulloch) 188
Diagnasis and management af Pain Syndromes, (Finnison) 429
Differentiatian 8etween Normal and Abnormal in Electrocardiagraphy, (Simanson) 106
Diseases af the Newborn, (Schaffer) 31
Disseminatian af Cancer: Preventian and Theropy, (Cale, McDanald, Raberts, and Southwick) 328
Dabsan, Austin J., Jr., and Hill, Edword, Synopsis of Genitaurinary Disease, 190
Danoldson, Blake F., Strong Medicine, 71
Dayle, John E., Extrocorpareal Hemodiolysis Theropy in Blood Chemistry Disorders, 73
Eorly Detection ond Diagnosis of Concer, (O'Donnell, Day, ond Venet) 153
Electrocordiogrophy, (Wolff) 189
Endocrine ond Metabolic Aspects of Gynecology, (Rogers) 430
Essentials of Pediatric Psychiotry, (Meyer, Levitt, Folick, Rubenstein) 190
Extracorporeol Hemodialysis Theropy in Blood Chemistry Disarders, (Doyle) 73
Finnisan, Bernord E., Diognosis ond Monagement of Poin Syndromes, 429
Flood, Fronk B., Kennedy, Richord J., ond Groce, Williom J., Medical Resident's Manual, 258
Florey, Howard (ed.) Generol Pothology, 154
Fundomental Skills in Surgery, (Neolon) 107
Gastroenterology, (8ockus) 256
Generol Pothology (ed.), (Florey) 154
Green, Marris ond Richmond, Julius, Pediotric Diognosis, 189
Gregory, Ion, Psychiotry—Biologicol ond Sociol, 73
Gynecology, (Porsons and Sommers) 189
Gynecolagy ond Obstetrics, (Huffman) 154
Handbaak of Pharmacology—The Actions and Uses of Drugs, (Cutting) 156
Hondbook af Psychiatric Treotment in Medicol Practice, (Kline ond Lehmon) 156
Holt, L. Emmett, Jr., McIntosh, Rustin ond 8ornett, Henry L., Pediotrics, 73
Huffman, John W., Gynecalogy ond Obstetrics, 154
Hughes, Jomes G., Synopsis of Pediatrics, 429
Human Testis: A Clinical Treatise, (Wershub) 73
Johnstone, Rutherfard, and Miller, S. E., Occupotional Diseases ond Industriol Medicine, 72
Klormann, Emil G., Cosmetic Chemistry for Dermatologists, 257
Kline, Nothan S., ond Lehmon, Heinz, Handbaok of Psychiatric Treatment in Medical Practice, 156
Knights, Edward, MacDonald, Roderick, ond Plompu, Joon, Ultramicro Methads for Clinicol Loboratories, 430
Likaff, Williom ond Moyer, John H., Coronary Heort Diseose, The Seventh Hahnemonn Sympasium, 258
Lare, John M., Jr., Atlos of Heod ond Neck Surgery, 153
Major, Rolph H., ond Delp, M. H., Physicol Diognosis, 224
Monual of Diabetes for the House Officer, (Nunes) 429
Mechanisms of Disease—An Introduction to Pathology, (Perez-Tamoyo) 152
Medicol Resident's Manual, (Fload, Kennedy, Grace) 258
Medicine Todoy; A Repart on o Decade of Progress, (Clark) 31
Meschon, Isodore and Farrar-Meschan, R. M. F., Synopsis af Raentgen Signs, 224
Meyer, Reuben, Folick, Mordecoi, ond Rubenstein, Ben O., Essentials of Pediatric Psychiatry, 190
Madern Concepts of Haspital Administrotian, (Owens) 188
Neolon, Thomas F., Jr., Fundomental Skills in Surgery, 107
Nunes, Williom T., Manual af Diobetes for the House Officer, 429
Occupotional Diseases ond Industriol Medicine, (Miller ond Jahnstone) 72
O'Donnell, Wolter E., Doy, Emersan, ond Venet, Louis, Eorly Detection ond Diognosis of Concer, 153
O'Donaghue, Don H., Treotment of Injuries to Athletes, 74
Ophthalmalogy in the Tropics, (Samerset) 256
Owens, Joseph Karlton, Modern Concepts of Hospitol Administrotion, 188
Parsons, Longdon, ond Sommers, Sheldan C., Gynecalagy, 189
Pediotric Diagnasis, (Green ond Richmond) 189
Pediotrics, (Holt, McIntosh, 8ornett) 73
Perez-Tomayo, Ruy, Mechonisms of Disease—An Introductian to Pothology, 152
Physical Diagnosis, (Major ond Delp) 224
Physiology of the Circulation in Humon Limbs in Heolth ond Disease, (Shepherd) 257
Primer of Cardialogy, (Burch) 288
Primer of Clinical Meosurements of Blood Pressure, (Burch, De Posquale) 107
Psychiatry—Biolagical and Sociol, (Gregory) 73
Rees, Rees B., Dermatoses Due to Enviranmentol and Physical Foctors, (ed.) 257
Reid, Duncon E., A Textbook of Obstetrics, 153

Rinkel, Max, (ed.) Specific and Non-Specific Factars in Psychopharmacalagy, 155
Robbins, Stanley L., Textbaak af Pathology, 72
Ragers, Joseph, Endocrine and Metabalic Aspects af Gynecalagy, 430
Rowe, Albert H. and Rawe, Albert, Jr., Bronchial Asthma: Its Diagnosis and Treatment, 328
Schaffer, Alexander J., Diseases of the Newbarn, 31
Self Hypnasis: A Canditianed-response Technique, (Sporks) 10B
Shepherd, John T., Physiology of the Circulatian in Humon Limbs in Health and Disease, 257
Simonson, Ernst, Differentiation Between Normal and Abnormal in Electrocardiagraphy, 106
Samerset, E. J., Ophthalmalogy in the Trapics, 256
Sparks, Laurance, Self Hypnosis, A Canditianed-respanse Technique, 10B
Specific and Nan-specific Factars in Psychopharmacology, (ed.), (Rinkel) 155
Strong Medicine, (Danaldsan) 71
Study of Psychophysical Methods for Relief of Childbirth Pain, (Buxton) 152
Surgery, (ed.), (Warren) 258
Surgery in World War II, (Cootes) 39B
Synopsis of Genitourinory Disease, (Dodsan, Hill) 190
Synopsis of Pediatrics, (Hughes) 429
Synopsis of Roentgen Signs, (Meschan and Farrer-Meschan) 224
Tenny, Benjamin, and Little, Brian, Clinical Obstetrics, 153
Textbaok of Endocrinology, (ed.), (Williams) 155
Textbook af Obstetrics, (Reid) 153
Textbaak of Ophthalmalagy, (Adler) 72
Textbook of Pathology, (Robbins) 72
Treatment af Injuries ta Athletes, (O'Danaghue) 74
Tullach, J. A., Diabetes Mellitus in the Tropics, 1BB
Ultromicro Methods far Clinical Laboratories, (Knights, MacDonald, and Plompu) 430
Warren, Richord, Surgery, (ed.) 25B
Wells, V. B., Clinical Pathology; Applicatian and Interpretation, 154
Wershub, Leonard Poul, The Human Testis, 73
Williams, Robert H., (ed.), Textbaak af Endacrinology, 155
Wolff, Lauis, Electrocardiography, 1B9
Wound Ballistics in Warld War II, (Caates) 399

C

CALCULI: See also Gallbladder, Urinary System, Bile Duct
 uric acid calculi, (Yearwood) 415
CANCER: See olso under name af organ or region offected
 af cervicol esophagus and hypopharynx; report and manogement utilizing en bloc excisian, (Pearce and athers) 169
 of prostate—types of neoplasms and procedures for diagnosis, (Geissler and athers) 174
CANDIDA ALBICANS
 culture medium for the detection af in affice proctice, (Slaughter and athers) 387
CARCINOMA: See Cancer
CARDIOVASCULAR DISEASE: See also Blood Vessels; Heart disease
 studies at U. S. Navol Aviation School, (Alleboch) 289
CHILDREN: See olso Infants; Pediatrics; under specific diseases
 battered child syndrome, 322-E
 clinical manifestotions af giardiosis, (McLaughlin) 350
CHLORDIAZEPOXIDE
 evoluotion of muscle relaxant properties, (Wickstram ond Hoddad) 140
CHOLECYSTITIS: See Gallbladder
CHOLELITHIASIS: See Gallbladder, Calculi
 and cholecystitis in yaung, (Kapsinow) 96
CHOLECYSTOGRAPHY: See Gallbladder, Roentgen Study
 study af gallbladder, visualization twa haurs after ingestion af cantrast medium, (Nice ond others) 92
CORONARY DISEASE
 cardiavascular studies at Aviotion Medical School, (U .S. Navy) (Alleboch) 2B9
COUGH
 Arnold's nerve reflex; little known cause af cough in pediatric patients, (Smith) 17
CYTRAN
 results of prophylactic treatment of premenstrual syndrome with, (Meyer) 19

D

DBI: See Phenethylbiguanide
DENTISTRY
 dentistry replies, (Rowe) 211
 question of deficiency in dental educotion; Dr. Bass replies ta Dr. Rowe, (Bass) 242
DEPRESSION
 unrecagnized, (Watkins) 191
DERMATOLOGY
 evaluation of griseofulvin ofter four years, (Derbes and Friedman) 276
DIABETES
 diabetes week, 393-E
DIABETES INSIPIDUS
 with superimpased pregnancy, (Gulatta and others) 383
DIABETES MELLITUS
 conservative control af the ambulatory diabetic, (Soye) 346
 drug induced, 355-E
 relaxed management af the ombulatory diabetic, (Herald) 342
DIAGNOSIS: See olsa under name af specific diseoses
 current thaught on congenital heart disease in infancy, (Reynolds) 196
 in diabetes mellitus, (Herald) 342
 neoplasms af prostote, pracedures far diagnosis, (Geissler and others) 174
 of skin tumors and treatment, (Tilley) 204
 pediatric nasal surgery, (Riggs) 329
DIALYSIS: See Kidney, Artificial
 peritoneal dialysis, (Muslow) 406
DRUGS
 benzathiadiazine derivatives in diobetes, 355-E
 Bilapaque, use in oral cholecystography, (Nice ond others) 92
 DBI ar phenethylbiguanide, discussion ond evoluation, (Stern) 163
 Orobilex, use in oral cholecystography, (Nice ond athers) 92
 Oragrofin calcium, use in oral cholecystography, (Nice and athers) 92
 Oragrafin sodium, use in orol cholecystography, (Nice and others) 92
DRUG THERAPY
 antihypertensive ogents, complicotians of, (Martinez-Lapez) 75
 recent trends in management of hypertension, (Leckert) 80

E

EDUCATION, MEDICAL: See also Schools, Medical
 adventure in cantinuing medical education, (Sonchez) 390
 cantinuing medical educatian, 392-E
 need for postgraduate caurses in psychiatry by the physician, (Sheeley) 365
ELECTROCARDIOGRAM: See Heart
 use in studies U. S. Naval Aviotion School, (Allebach) 289
ELECTROCARDIOGRAPHY
 respansibility of the electrocordiagrapher, (Billings) 109
ERGOTAMINE
 sublingual (Wigraine) tablets for headaches, (Ogden) 23
ESOPHAGUS
 corcinoma of cervicol esophagus and hypopharynx; repart ond monagement, (Peorce and Schramel) 169
EYES
 cambined Atrapine-Fluorapryl treatment for selected children with suppressian omblyopio, (Baldone) 420
 whot the general practitioner should know obout glaucama, (Azor) 317

F

FAMILIES
 psychotherapy in fomilies rother thon individuols, (Caruso) 312
FATTY LIVER
 clinicol and pathologicol findings, 100-E
FEDICARE
 new King-Anderson bill, 181-E
FOOD
 significance of food ollergies in pediotric allergy, (Hensel) 128
FRACTURES
 facial—in an auto accident victim wearing o seot belt, (Aiken) 235

G

GALLBLADDER
 and cholelithiasis in young, (Kopsinow) 96
 cholecystograph study of 2 hr. oral, (Nice ond others) 92
GALLBLADDER-ROENTGEN STUDY
 roentgen study, twa haurs after ingestion of contrast medium, (Nice ond others) 92
GAMMA GLOBULIN
 present status in therapy for asthmatic children, (Thamas and McGovern) 270
GERIATRICS
 mental hospital program—an experiment, (Barber) 243
GIARDIASIS
 clinical manifestotions in children, (McLoughlin) 350
GLAUCOMA
 medical vs. surgicol therapy, (Haik ond Ellis) 4B
 what the general practitioner should know, (Azar) 317
GYNECOLOGY
 odrenogenitol syndrome, ospects af, (Borclay and Dingman) 4

H

HEADACHE: See alsa Migraine
 sublingual (Wigraine) tablets, (Ogden) 23
HEART DEFECTS
 abnormalities, specific, amenable ta surgery, (Hollis) 273
HEART DISEASE, CORONARY: See Arteries, Caronory
 congenital heart disease in infancy, current thaught on, (Reynolds) 196

HEMORRHAGE: See olso names of diseases, regions, and organs affected
postpartum as related to panhypopituitarism, (8uddington) 208
HERMAPHRODITISM
gynecological aspects of the adrenagenital syndrome, (Barclay and Dingman) 4
HOMOSEXUALITY
as an adaptotion in hondling oggression, (Brawn) 304
HYPERTENSION
drug therapy, complications of, (Martinez-Lopez) 75
management, recent trends in, (Leckert) 80
renal, experiences with, (Boudreaux and others) 88
HYPOGLYCEMIA: See Blood Sugar
psychiatric monifestotions when combined with hypothyroidism, (Buddington) 208
HYPOTHYROIDISM
psychiatric manifestatians when combined with hypoglycemia, (Buddington) 208

I

IMMUNIZATION
97 per cent reductian in palia, 65-E
INFANTS: See also Children; Infants; Newborn; Pediatrics; under names of specific diseases
heart disease, congenital, current thoughts an, (Reynalds) 196
pediatric nasal surgery, (Riggs) 329
INJURIES: See alsa Fractures, and under argan, region, ar structure affected
knee, acute othletic ligamentaus, observations on, (Lawrey and others) 178
urinary tract, (Morshall) 130
INSULIN
use in conservative control of the ambulatory diabetic, (Saye) 346
INTESTINES
clinical manifestatians af giardiosis in children, (McLaughlin) 350
IODINE
use T^3 uptake, red cell, tagged triiodothyronine far evaluatian of thyroid functian, (Nunnally) 1

K

KIDNEYS: See also Urinary System
urology and renal physiolagy, (Schlegal) 401
KNEE
injuries, acute athletic ligamentaus, observotions on, (Lowrey and others) 178

L

LIVER
cirrhosis with irreversible ascites—surgicol management, (Madden) 157
fatty, clinical and pathalagical findings, 100-E
LOUISIANA
adventure in continuing medical education, (Sanchez) 390
cantinuing medical education, 392-E
experience with use of Salk vaccine and camments on the Sabin Oral Polio Vaccine, (Hedmeg) 41
geriatric pragram in o mental hospital, an experiment, (Barber) 243
mental health treatment centers, use of, (Watkins) 191
respirotory diseases, a community problem, (Jacobs) 237
tularemia, 339 cases reviewed, (Dienst) 114
LOUISIANA MEDICAL POLITICAL ACTION COMMITTEE
PACS functians, state, and warkings AMPAC, (Adoms) 259
suppart urged, 355-E
LOUISIANA STATE BOARD OF HEALTH
experience with use af Salk Vaccine ond comments on the Sabin Oral Palia Voccine, (Hedmeg) 41
LOUISIANA STATE MEDICAL SOCIETY
83rd meeting, Dr. George Hauser elected president, 214-E
LUNGS
solitary nadules, diagnasis and treotment, (St. Roymond) 61

M

MEDICAL
medical versus surgical therapy for glaucomo, (Haik and Ellis) 48
MEDICAL CARE: See alsa Medical Service, Old Age
King-Andersan bill, new, "Fedicare", 181-E
MEDICAL NEWS
30, 69, 105, 150, 185, 222, 254, 286, 326, 359, 396, 427
MEDICINE
some prablems invalved in preservation of practice of medicine, (Welch) 225
the physician abhors prospect of practice under police state, 281-E
MEDICINE AND THE LAW
insurance documents and certificates, passible basis of legal actian, 423-E
MENTAL DISORDERS
geriotric program in a mental hospital—an experiment, (Barker) 243
MURDER
a psychopath wha killed, (Trice ond Butler) 379
MUSCLE RELAXANTS
an evaluatian of Librium (chlardiazepaxide), (Wickstrom and Haddad) 140

N

NEOPLASMS: See Cancer under regian ar organ affected
NERVOUS SYSTEM
Arnald's nerve reflex; little known cause af caugh in pediatrics, (Smith) 17
NEW ORLEANS
asthma epidemic in, (Lewis) 300
NODULES
pulmanary, diagnasis and treatment, (St. Raymand) 61
NOSE
pediatric nasal surgery, (Riggs) 329
what physicians should know abaut nasal plastic surgery, (Anderson) 337

O

OLD AGE
Kerr-Mills bill sponsared by AMA, (Welch) 225
mental haspital experiment, (Barber) 243
OPHTHALMOLOGY
medical vs. surgical therapy in glaucoma, (Haik and Ellis) 48
ORAL HYGIENE
dental educatian deficiency (questian of) Dr. Bass replies ta Dr. Rowe, (Bass) 242
ORGANIZATION SECTION
AMA repart on actians of hause af delegates Nov. 25-28, 1962, Los Angeles, 27
AMA repart on actians of the hause af delegates, 112th annual meeting, June 16-20, 1963, Atlantic City, 283
AMA auxiliary, appeal for member caaperation, 394
AMPAC-LAMPAC, 358
comparison between Kerr-Mills law and King-Anderson bill, health services far the aged, 104
Dr. Thomas elected president Americon Rhinolagic Saciety, 426
grawing number af elders, 425
important electian, 425
health insurance infarmation, 325
King-Anderson bill, 183
King-Andersan bill, 358
LSMS, arrangements cammittees, 1963 annual meeting, New Orleans, May 6-8, 1963, 68
LSMS, chairman af cammittees, 1963-1964, 324
LSMS, minutes af hause af delegates, 216
LSMS, Ralph H. Riggs, M. D., President, 1962-1963, 148
LSMS, state meeting af hause of delegates, 249
LSMS, visit af Dr. Annis ta N. O., 102
majar medical coverage grows, 426
public health spending increased, 426
public haspital may nat bar doctar becouse of personal friction, 29
sacial security, reprint from Journal of Americon Ins. 250
status af the prescriptian drug industry's petitian challenging certain FDA regulatians over Rx advertising, 394
tetanus immunizatian, 358
ORTHOPEDICS
evaluatian of muscle relaxant properties Librium, (chlardiazepoxide), (Wickstram ond Haddad) 140
OXYGEN
therapy in high altitude pulmanary edema, 247-E

P

PARALYSIS
nanpalio viruses and paralytic disease, 146-E
PEDIATRICS: See alsa Children; Infants
clinical manifestatians af giardiasis, (McLaughlin) 350
cambined Atrapine-Fluarapryl treatment for selected children with suppressian amblyopia, (Baldone) 420
faad allergies, significance of, (Hensel) 128
little knawn cough, cause of Arnold's reflex, (Smith) 17
nasal surgery, (Riggs) 329
PEPTIC ULCER
antichalinergic drugs with added sedative, dauble blind study, (Roach) 136
duadenal ulcer, chronic, individualizotion in surgicol treatment af, (Becker) 229
PHENETHYLBIGUANIDE
DBI general discussion and evaluation, (Stern) 163
PHYSICAL EXAMINATION
permanent physical impairment, permanent disobility, and the physician, 423-E
PHYSICIANS
permanent physical impairment, permanent disability, and the, 423-E
PLASTIC SURGERY: See Surgery, Plastic
POLIOMYELITIS
advantages and disadvantages af the Salk and Sabin Vaccines, with recommendatians, (Smith) 33
immunization, 97 per cent reductian in, 65-E
nanpolioviruses and paralytic disease, 146-E
PREGNANCY
and diabetes insipidus, (Gulatta and athers) 383
PREMENSTRUAL SYNDROME
result af prophylactic treatment with Cytran, (Meyer) 19
PROSTATE
biopsies, (Geissler and athers) 174

PSEUDOHERMAPHRODITISM: See Hermaphroditism
PSYCHIATRY
depression, unrecagnized, (Watkins) 191
monifestations of Sheehan's syndrome, (Buddington) 208
treotobility of emotional states by the practicing physician, (Sheeley) 36S
PSYCHOANALYSIS
in transforming modern Americon psychiotry, (Burdon) 374
in hamosexuolity, (Brown) 304
PSYCHOPATHY
abundance af abnormol variants of behavior, (Trice and Butler) 379
PSYCHOSOMATIC MEDICINE
management by primary physician, (Sheeley) 36S
PSYCHOTHERAPY
brief principles, (Burdon) 374
in families rather than individuals, (Caruso) 312
PULMONARY ARTERY
clinical valve of pulmonory function testing, (Solomon) 41B
high altitude pulmonary edema, 247-E
PULMONARY EMBOLISM
recurrent pulmonary infarction partially mosked by antibiotic therapy, (Greenberg) 201
PYELONEPHRITIS
hypertensive studies, (Boudreaux and others) 88

R

RENAL ARTERY
renal hypertension, (Boudreaux and others) 88
RESPIRATORY SYSTEM: See alsa Branchus; Lungs
clinical valve of pulmonary function testing, (Salamon) 418
diseoses, o community problem, (Jacobs) 237
RESPIRATORY TRACT INFECTIONS
gomma globulin therapy for asthmatic children, (Thomas and McGovern) 270
RESUSCITATION
office methods discussed, (Foster) S7
various methads of life saving in an emergency are enumeroted ond discussed, (Foster) S7

S

SABIN VACCINE: See Paliamyelitis
advantages and disodvantages of the Solk ond Sabin Vaccines with recommendatians, (Smith) 33
SALK VACCINE: See Poliomyelitis
experience with use of Salk Vaccine and comments on the Sabin Oral Polia Vaccine, (Hedmeg) 41
advantages ond disodvontoges of the Salk ond Sobin Vaccines with recommendatians, (Smith) 33
SEX DEVIATION: See Homosexuolity
SHEEHAN'S SYNDROME
phychiatric manifestations, (Buddington) 208
SHOULDER
harness, questian af need for traffic safety, (Aiken) 23S
SKIN: See also Dermotology
evaluation of griseafulvin ofter four yeors, (Derbes ond Friedman) 276
SOCIAL SECURITY
medical core for oged, criticism of, (Welch) 22S
new King-Andersan bill "Fedicare", 181-E
physician abhors prospect of practice under police state, 2B1-E
SULFONYLUREAS
use of combined with DBI or phenethylbiguanide, (Stern) 163
SURGERY: See olso under specific diseases, organs and operotions
acute athletic ligamentous knee injuries, (Lowrey ond others) 17B
ascites, pathagenesis ond surgicol treatment, (Modden) 1S7
carcinama of cervical esophogus ond hypopharynx, (Pearce and Schramel) 169
cardiavascular abnormalities, omenable to, (Hollis) 273
complications in management af thrombophlebitis and thromboembolic phenomena, (Stander and Cacioppo) 263
glaucama, medicol vs. surgical, (Haik ond Ellis) 48
hozards of in patients under antihypertensive therapy, (Leckert), B0
heart diseose (congenital) in infancy, (Reynolds) 196
injuries to urinary tract ond, (Marshall) 130
management of chronic duadenal ulcer, (Becker) 229
pediatric nasal, (Riggs) 329
renal hypertensian, (Boudreaux ond others) 88
SURGERY, PLASTIC
what physicians should know about nasal plastic surgery, (Anderson) 337

T

THORACTOMY
pulmonory nodules, diognosis and treotment, (St. Roymand) 61
THROMBOPHLEBITIS
ond thromboembolic phenomena, monogement af, (Stander and Cocioppo) 263
THROMBOSIS
and thromboembolic phenomeno, manogement of, (Stander ond Caciappa) 263
THYROID
evaluation of function using I^{131} tagged triiodothyronine red cell uptoke (T^3 uptake), (Nunnolly) 1
TOENAIL
highly ingrown, (Morx) 98
TRANQUILIZING DRUGS: See alsa under nome of specific drugs
Librium, an evoluotion of the muscle relaxant properties, (Wickstrom and Haddad) 140
TRAUMA: See olso under name of specific diseose ond of organ, region or structure offected
children, intentional in, 322-E
urinary tract injuries, (Morsholl) 130
TULAREMIA
review of 339 coses, (Dienst) 114
TUMORS: See also under names of specific organs and types of tumors
diagnosis and treatment of skin tumors, (Tilley) 204

U

ULCERS: See olso Peptic Ulcers
URIC ACID
calculi, (Yearwood) 41S
URINARY CALCULI
uric acid calculi, (Yeorwoad) 41S
URINARY SYSTEM: See Kidneys
injuries to tract, (Marshall) 130
uric acid calculi, (Yeorwood) 41S
UROLOGY
and renal physialogy, (Schlegel) 401
U. S. NAVY
cardiovascular studies ot Aviotion Medical School, (Allebach) 289

V

VACCINES
advantages and disadvontages of the Salk ond Sabin Vaccines with recammendations, (Smith) 33
Sabin and Solk use in paralytic disease, 146-E
VIRUS
nonpalioviruses ond porolytic diseose, 146-E

AUTHOR INDEX

A
Adams, M. Voun, 2S9
Aiken, David Wyatt, 23S
Allebach, Newton W., 289
Anderson, Jack R., 337
Azor, Robert F., 317

B
Baldone, Joseph A., 420
Banks, T. E., 178
Barber, D. B., 243
Barclay, David L., 4
Bass, Charles C., 242
Beacham, W. D., 3B3
Becker, Walter F., 229
Billings, F. Tremoine, 109
Baudreaux, J. L., 88
Brawn, James H., 304
Buddingtan, Wells, 208
Burdan, Arthur P., 374
Butler, Joel L., 379

C
Cocioppa, D. V., 263
Campbell, J. H., 174
Caruso, Gearge J., 312

D
Davidson, G. A., 387
Davis, P. M., 17B
Derbes, Vincent J., 276
Dienst, F. T., 114
Diggdon, P. D., 88
Dingmon, Joseph F., 4

E
Ellis, George S., 48

F
Foster, Edward M., S7
Friedman, Larraine, 276

G
Geissler, W. L., 174
Greenberg, Henry B., 201
Gulotta, C. J., 3B3

H
Haddad, Ray, 140
Haik, George M., 48
Hedmeg, Andrew, 41
Hensel, Albert E., 12B
Herold, A. A., 342
Hallis, Walter J., 273

J
Jacobs, Sidney, 237

K
Kapsinow, Robert, 96

L
Leckert, John T., 80
Lewis, Robert, 300
Lowrey, C. W., 178

Mc
McGovern, John P., 270
McLoughlin, Lloyd, Jr., 3S0

M
Madden, John L., 1S7
Marshall, J. C., 130
Martinez-Lopez, Jorge I., 7S
Marx, Fred A., 9B
Meyer, Harry, 19
Moutan, Ramon A., 92
Muslow, Ike, 406

N
Nice, Chorles, N., 92
Nunnally, Richard, 1

O
Odgen, Henry D., 23

P
Pasquier, C. M., 174
Pearce, Charles W., 169

R
Radwin, H. M., B8
Reynalds, J. L., 196
Riggs, Ralph H., 329
Roach, Thomas C., 136
Rowe, Nathaniel H., 211
Roy, Monuel, 92

S
St. Martin, E. C., 174
St. Raymand, Albert H., Jr., 61
Sanchez, Rafael, 390
Saye, Van B., Jr., 346
Schlegel, J. U., BB and 401
Schramel, Robert J., 169
Sheeley, William F., 36S
Sloughter, B. C., 387
Smith, F. Michael, Jr., 17
Smith, Margoret, H. D., 33
Solomon, Morton, 418
Stander, Leonard H., 263
Stern, Sol B., 163

T
Thomas, Orville C., 270
Tilley, Joe C., 204
Trice, Jahn C., 379

W
Watkins, Charles, 191
Webster, H. D., 383
Welch, Norman A., 22S
Wickstrom, Jack, 140
Woads, G. T., 387

Y
Yeorwoad, H. M., 41S



The Lady Governors of the Old Men's Home at Haarlem — FRANS HALS, 1580/81-1666

In Geriatrics...

METAMUCIL® Provides Bland Smoothage

brand of psyllium hydrophilic mucilloid

The tendency of the elderly to subsist on low-residue foods often is a prime cause of bowel sluggishness. Adequate fecal content is necessary to maintain normal colonic function, since intracolonic distention is nature's method of stimulating reflex peristalsis.

Metamucil, therefore, fulfills a basic function in the treatment of geriatric constipation. It both softens hard, dehydrated fecal concretions and adds smooth, nonirritant, easily compressible hydrophilic bulk.

Metamucil applies a physiologic principle to correct constipation naturally.

Average Adult Dose: One rounded teaspoonful of Metamucil powder (or one packet of Instant Mix Metamucil) in a glass of cool liquid. To Metamucil powder, a refined, purified and concentrated psyllium hydrophilic mucilloid, an equal amount of dextrose is added as a dispersing agent. Each dose of the powder furnishes a negligible amount of sodium and 14 calories. To the mucilloid in Instant Mix Metamucil citric acid, sodium bicarbonate and mild flavoring are added. Each dose of Instant Mix Metamucil furnishes 0.25 Gm. of sodium and 3 calories. Metamucil is available as Metamucil powder in containers of 4, 8 and 16 ounces and as flavored Instant Mix Metamucil in cartons of 16 and 30 single-dose packets.

G. D. SEARLE & CO.
CHICAGO, ILLINOIS, 60680
Research in the Service of Medicine



it's a long walk from gate 6...

It's a long walk from almost *anywhere* for anyone suffering the excruciating, itching discomfort of *pruritus vulvae.* ARISTOCORT Triamcinolone Acetonide Cream is highly active against the embarrassing and intolerable irritation of pruritus ani and vulvae. Sparing application to the affected area—3 to 4 times daily—usually provides rapid relief. And when excoriation of the area has led to infection, the choice of NEO-ARISTOCORT Neomycin Sulfate-Triamcinolone Acetonide will assure activity against a wide range of skin pathogens. A possible side effect may be local skin sensitization due to neomycin. Contraindications (both forms): tuberculosis of the skin, herpes simplex, and chicken pox. Prescribe tubes of 5 or 15 Gm. Also available in ½ lb. jars.

Aristocort® TOPICAL CREAM 0.1% AND OINTMENT 0.1%
Triamcinolone Acetonide

Neo-Aristocort® CREAM 0.1% AND OINTMENT 0.1%
Neomycin Sulfate (0.5%)—Triamcinolone Acetonide (0.1%)

Lederle LEDERLE LABORATORIES • A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York
232-3

Browne-McHardy Clinics

MAIN CLINIC
3636 St. Charles Ave.
New Orleans 15, La.
TWinbrook 9-2376

GRAVIER ST. DIVISION
630 Gravier St.
New Orleans 12, La.
524-1605

VETERANS HIGHWAY DIVISION
8601 Veterans Memorial Hwy.
Metairie, La.
VErnon 3-7341

INTERNAL MEDICINE
Cardiology
Endocrinology
Gastroenterology
Hematology
Rheumatology

Donovan C. Browne, M. D.
Wiley H. Jenkins, M. D.
Robert C. Judice, M. D.
John T. Leckert, M. D.
G. Gordon McHardy, M. D.
Robert J. McHardy, M. D.
Swan S. Ward, M. D.
George E. Welch, M. D.
Guy T. Williams, M. D.
Manuel Paez, M. D.

DERMATOLOGY
William Eggerton, M. D.

DISEASES OF THE CHEST
Joseph E. Blum, Jr., M. D.

EAR, NOSE and THROAT
Norma Kearby, M. D.

GENERAL SURGERY
Claude C. Craighead, M. D.
Raul G. Reyes, M. D.

OBSTETRICS and GYNECOLOGY
C. Gordon Johnson, M. D.
Robert I. Ayerst, M. D.
James M. Todd, Jr., M. D.

OPHTHALMOLOGY
Oliver H. Dabezies, M. D.

INDUSTRIAL MEDICINE
Ralph J. McDonough, M. D.

PEDIATRICS
Carl E. Kemmerly, M. D.
Milton H. Donaldson, M. D.

RADIOLOGY and RADIOTHERAPY
Charles O'Dowd Lilly, M. D.
Joseph B. Marino, M. D.
Walter McDowell, M. D.

UROLOGY
John F. Lally, M. D.
George Cuellar, M. D.

AUXILIARY SERVICES
Cytology
Diabetics
Electroencephalograph
Endoscopy
Medical Laboratory
Pharmacy
Physical Therapy
Pulmonary Function Studies

To thank you as we'd like to do

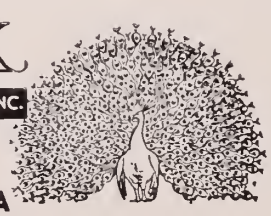
Is far beyond our powers.

For if we had no friends like you

There'd be no firm like ours.

MERRY CHRISTMAS AND HAPPY NEW YEAR

PEACOCK
SURGICAL COMPANY INC.
1235 TEXAS AVENUE
SHREVEPORT, LOUISIANA





In Sprains, Strains and Muscle Spasm, 'Soma' Compound

numbs the pain...not the patient

A potent analgesic and a superior muscle relaxant

1. A sprain or fracture is not a big clinical problem—but it does hurt. And if there is housework to do and kids to mind, the patient needs something to numb the pain.

2. A.P.C. compounds have limited usefulness; and the patient can buy them without your prescription. Unfortunately, most of them are too mild to be effective for sprains—and more potent products too often make the patient feel 'dopey'.

3. 'Soma' Compound is ideal in these cases. Since it contains both 'Soma' (carisoprodol) and acetophenetidin it is both a potent analgesic and a superior muscle relaxant; it also contains caffeine to offset any drowsiness *("numbs the pain...not the patient")*.

4. Why not try 'Soma' Compound? Dosage is 1 or 2 tablets q.i.d. For more severe pain, try 'Soma' Compound + Codeine. Dosage: 1 or 2 tablets q.i.d.

5. Hypersensitivity to carisoprodol may occur rarely. Codeine may produce addiction, nausea, vomiting, constipation or miosis.

Soma® Compound

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg.

Soma® Compound + Codeine

carisoprodol 200 mg., acetophenetidin 160 mg., caffeine 32 mg., codeine phosphate 16 mg. (Warning—may be habit forming.)

®WALLACE LABORATORIES / *Cranbury, N.J.*

CSO-9193

Colds haven't changed— but relief has with NTz® NASAL SPRAY

NTz Nasal Spray gives on-the-spot relief for stopped-up noses instantly. Recommended by doctors for 10 years, it provides not one, but three powerful ways to fast relief.

In a carefully balanced formula, NTz contains:

Neo-Synephrine® HCl to shrink swollen nasal tissues and provide enough space for breathing

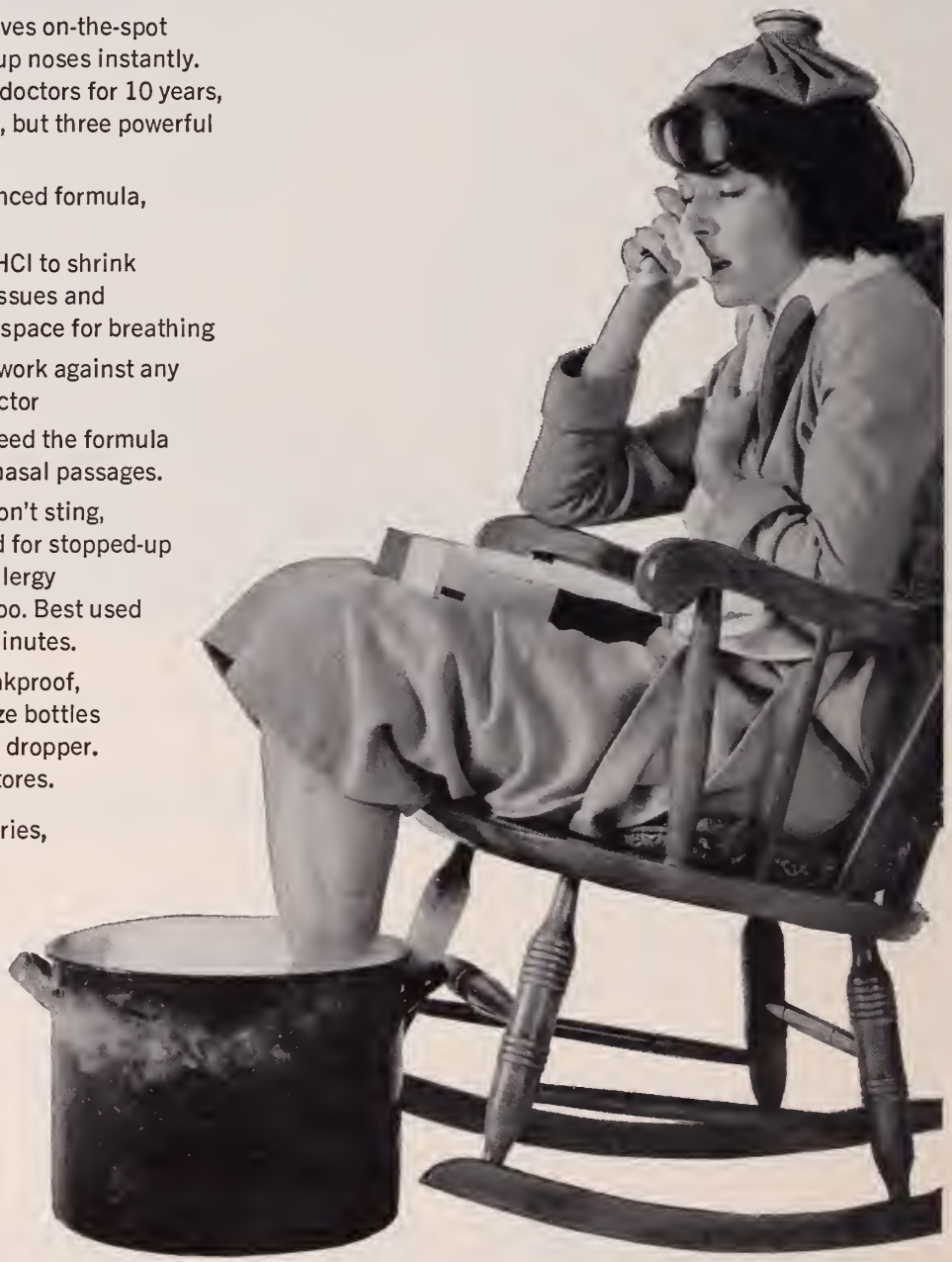
Thenfadil® HCl to work against any local allergic factor

Zephiran® Cl to speed the formula through all the nasal passages.

NTz Nasal Spray won't sting, won't irritate. Good for stopped-up noses caused by allergy and for sinusitis, too. Best used **twice** within five minutes.

NTz supplied in leakproof, pocket-size squeeze bottles and in bottles with dropper. Sold only in drugstores.

Winthrop Laboratories,
New York 18, N. Y.



Winthrop

NTz, Neo-Synephrine (brand of phenylephrine), Thenfadil (brand of thenyldiamine) and Zephiran (brand of benzalkonium, as chloride, refined), trademarks reg. U. S. Pat. Off.

Important news in cardiac therapy

Two new clinical reports document successful long-term treatment of ischemic heart disease with Persantin®, brand of dipyridamole

See next 3 pages

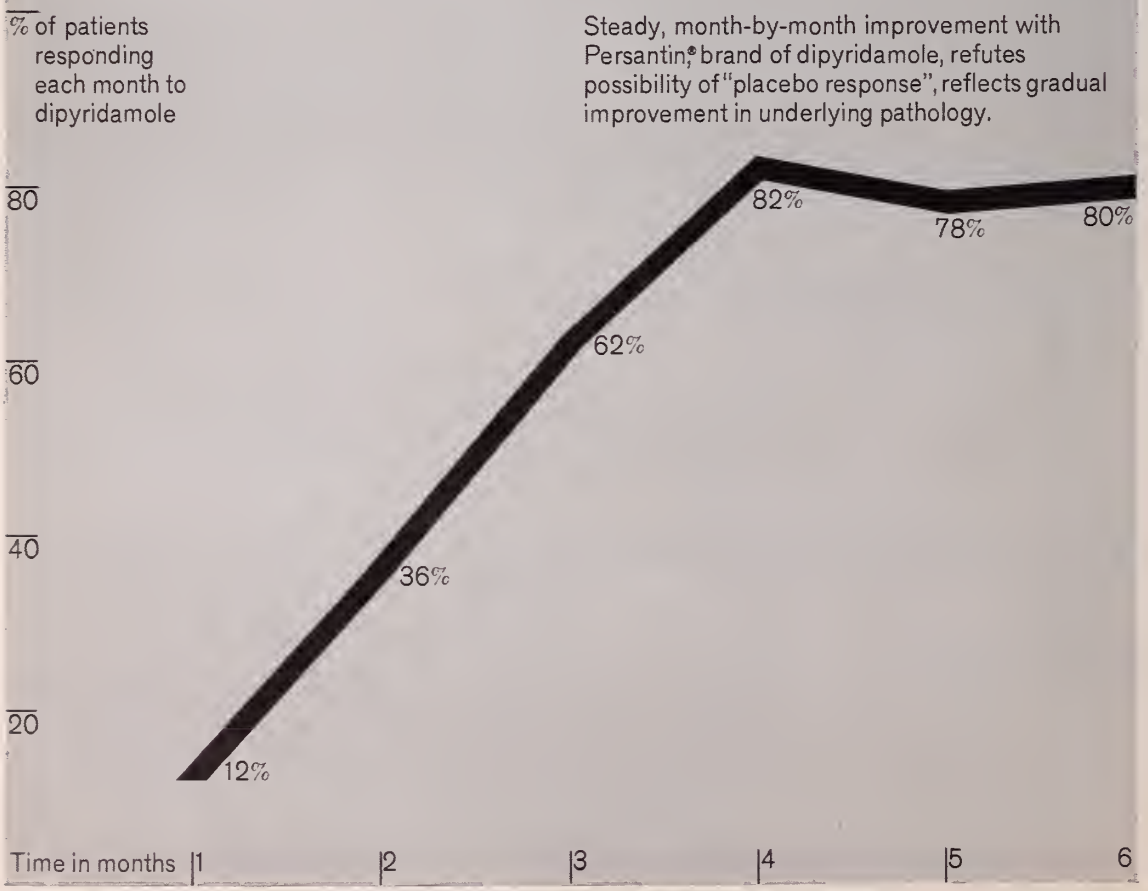
Study 1.
Griep,A.H.: Long-term Therapy of Ischemic Heart Disease With Oral Dipyridamole: A Report of Fifty Cases. Angiology 14:484, 1963.

Persantin,® brand of dipyridamole, 25 mg. t.i.d. or q.i.d.,was administered continuously for 6 months to 50 patients with well authenticated ischemic heart disease with angina pectoris and ECG abnormalities. Results were evaluated on a monthly basis.

Persantin® brand of dipyridamole

"...long-term oral therapy with dipyridamole was of benefit in 80 per cent of the patients...

"relief [of angina] came slowly and was usually maximal after three to six months of continuous treatment"



Study 2.
Wirecki,M.: Dipyridamole (Persantin®): Evaluation of Long-Term Therapy in Angina Pectoris. Current Therapeutic Research 5:472, 1963.

In 40 ambulatory patients with myocardial ischemia, angina pectoris, and abnormal ECG findings, Persantin,® brand of dipyridamole, 25 mg. t.i.d., was administered continuously for 3 months.

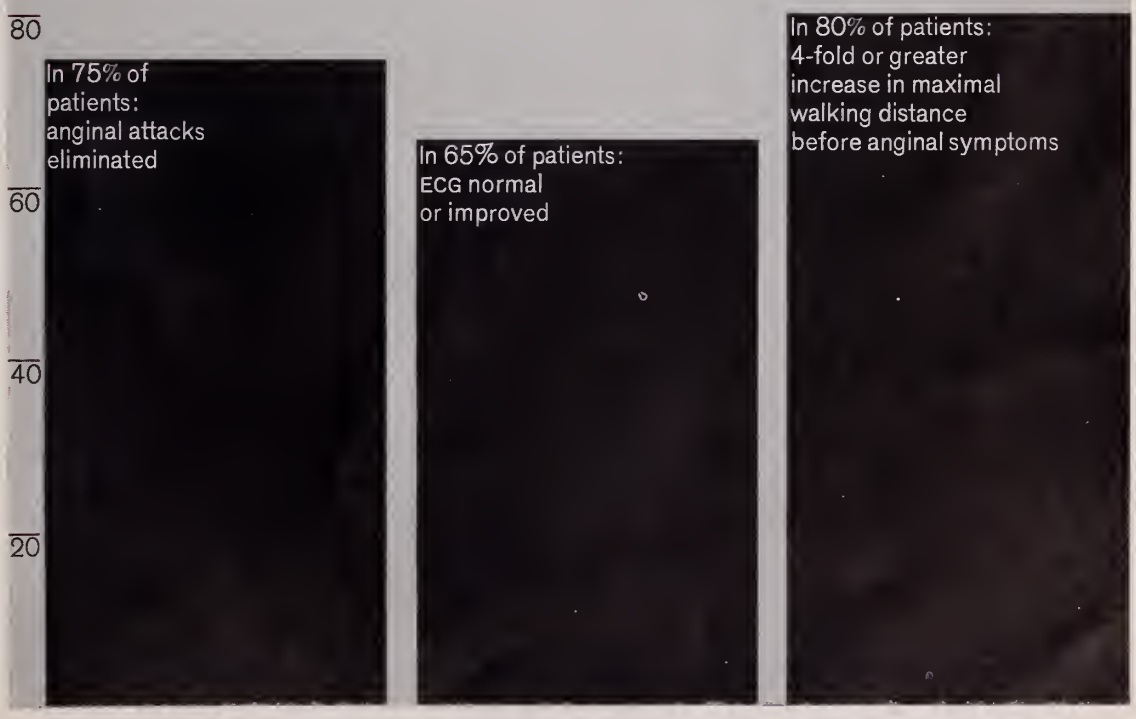
Geigy

After 3 months, 32 of 40 patients showed:

"...reduction or abolition of acute anginal attacks...

"complete or almost complete disappearance of ECG abnormalities...

"marked increase" in walking distance without anginal symptoms



Persantin® brand of dipyridamole

How long-term therapy provides clinical benefits reported on previous pages

1. By increasing energy yield
of the hypoxic myocardial cell, by direct action upon the sarcosomes (heart mitochondria).[1-5]

2. By improving collateral coronary circulation.
Prolonged oral administration of dipyridamole to animals with experimentally induced stenosis of a major coronary artery resulted in superior development of collateral coronary anastomoses and longer survival compared with controls.[6-9]

When given for prolonged periods and in adequate dosage, dipyridamole improves the coronary flow deficit of the ischemic myocardium while supporting cardiac metabolism during the period of repair. Clinically, this is manifested as steady improvement – anginal attacks diminish in frequency and intensity, as do other manifestations of insufficiency (dyspnea, fatigue, and, in many instances, abnormal electrocardiographic findings).

Availability:
Tablets of 25 mg., bottles of 100 and 1000.
Under license from Boehringer Ingelheim G.m.b.H.

Prescribing summary: Persantin,® brand of dipyridamole, is indicated in coronary and myocardial insufficiency, in a dosage of 2 to 6 tablets daily in divided doses before meals for several weeks. Side effects (headache, dizziness, nausea, flushing, weakness, syncope, mild gastrointestinal distress) are minimal and transient. The drug is not recommended in the acute phase of myocardial infarction, and should be used cautiously in hypotension.

References: 1.Kunz,W.;Schmid,W.,and Siess,M.: Arzneimittel-Forsch.12:1098,1962. 2.Siess,M.: Arzneimittel-Forsch.12:683,1962. 3.Laudahn,G.: Experientia 17:415,1961. 4.Lamprecht,W.: 27th Congress of the German Society for Circulation Research,Bad Nauheim,1961. 5.Hockerts,T.,and Bögelmann,G.: Arzneimittel-Forsch.9:47,1959. 6.Vineberg,A.M.,et al.: Canad.M.A.J.87:336,1962. 7.Chari,S.R.,et al.: Presented at the International Congress of Chest Physicians,New Delhi,1963. 8.Neuhaus,G.,et al.: Presented at the Fourth World Congress of Cardiology,Mexico City,1962. 9.Asada, S.,et al.: Japanese Circ.J.26:849,1962.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York, Distributors

PE-2290



Smooths out emotional peaks and valleys

'Meprospan'-400 brand of meprobamate contains 400 mg. in sustained-release form. One capsule smooths out the anxious patient's emotional peaks and valleys for 10 to 12 hours – and provides these other advantages:

1. **Especially suitable for maintenance therapy.** Patients whose anxiety has diminished to a mild or moderate level still require a certain amount of tranquilization throughout the day. Sustained-release action is ideally suited to this type of patient.
2. **Simpler dosage schedule.** Since one capsule of 'Meprospan'-400 (meprobamate, sustained release) acts 10 to 12 hours, the patient enjoys a much simpler dosage schedule than with tablets – and is less likely to forget to take the medicine.

Side Effects: Rarely, skin reactions. May increase effects of excessive alcohol. Use with care in patients with suicidal tendencies. Massive overdosage may produce coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence in patients with history of drug or alcohol addiction.

Available: *'Meprospan'-400* (meprobamate, sustained release) contains meprobamate 400 mg. *'Meprospan'-200* (meprobamate, sustained release) contains meprobamate 200 mg. Both potencies in bottles of 30. **Usual dosage:** One 400 mg. capsule or two 200 mg. capsules at breakfast; repeat with evening meal.

Meprospan®-400
meprobamate 400 mg.
sustained release

WALLACE LABORATORIES / *Cranbury, N.J.*

CME-9188

ANNUAL CLINICAL CONFERENCE

CHICAGO MEDICAL SOCIETY

March 2, 3, 4 and 5, 1964

Palmer House, Chicago

Lectures

Teaching Demonstrations

Medical Color Telecasts

Film Lectures

Instructional Courses

The CHICAGO MEDICAL SOCIETY ANNUAL CLINICAL CONFERENCE should be a MUST on the calendar of every physician. Plan now to attend and make your reservation at the Palmer House.

One out of three *who died of cancer last year* ***could have been saved!***



To alert the practicing physician to suspect and diagnose cancer early—the American Cancer Society has available for you a film series of Physicians' Conferences on Cancer.

*Kinescopes of live, color, closed-circuit television programs, on early diagnosis and treatment of cancer, present outstanding clinicians.

These 24 film programs—the nucleus of a course on cancer for the General Practitioner—cover virtually all cancer sites and types. They center around panel discussions, laboratory techniques, case histories, x-ray findings, histopathology, statistical data, and operative procedures.

Professional Films and services available to the doctor in his own community may be obtained through your Division of the

American Cancer Society

* APPROVED BY THE AMERICAN ACADEMY OF GENERAL PRACTICE FOR INFORMAL STUDY CREDIT (16 MM COLOR SOUND FILMS. RUNNING TIME 30-50 MINUTES)

AMERICAN CANCER SOCIETY, Louisiana Division, Inc., 822 Perdido Street, New Orleans 12, La.

cut Rx writing by 2/3 in colds, flu or grippe

NAME _____

ADDRESS _____

℞

No need to write three separate prescriptions for antitussive, decongestant and analgesic relief of common cold, flu or grippe symptoms when it is therapeutically correct... economically sound...to specify

ANTITUSSIVE/DECONGESTANT/ANALGESIC
'EMPRAZIL-C'® TABLETS

Each tablet contains:

Codeine Phosphate*	15 mg.
'Sudafed'® brand Pseudoephedrine Hydrochloride	20 mg.
'Perazil'® brand Chlorcyclizine Hydrochloride	15 mg.
Phenacetin	150 mg.
Aspirin	200 mg.
Caffeine	30 mg.

*Warning—may be habit forming

'Emprazil-C' Tablets are available on prescription only.

Dosage: Adults and children over 12 years—1 or 2 tablets—3 times daily as required. Children 6 to 12 years—1 tablet—3 times daily as required. **Caution:** While pseudoephedrine is virtually without pressor effect in normotensive patients, it should be used with caution in hypertension. Also, while chlorcyclizine has a low incidence of antihistaminic drowsiness, the usual precautions should be observed. **Supplied:** Bottles of 100 tablets.

Also available without codeine as 'EMPRAZIL'® TABLETS

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO (U.S.A.) INC.

Tuckahoe, N. Y.



vacancy

"The direct cost for caring for the mentally ill is $1,7 billion a year. Workers who become mentally ill lose over half a billion dollars in earnings each year.

*Staff in one mental hospital recently tried an experiment with 65 patients who had been confined for an average of 13 years. They practiced the best treatment methods now known and, within six months to a year, 37 of these patients were well enough to be discharged. Only eight of the discharged patients failed to hold the gains they had made for at least a year after they left the hospital."**

Hope now, where there was no hope. Drugs which help now, where there were no known drugs which helped—even five years ago. Independent drug research is continuing in this vital area. But, should it be discontinued because the cost must somehow be reflected in the ultimate price of the new drug—if it is to be discovered? Or should the sign read, as it has throughout time in overcrowded mental institutions: "NO VACANCIES."

*U.S. Department of Health, Education and Welfare, Public Health Service Publication No. 813.

This message is brought to you on behalf of the producers of prescription products.

PHARMACEUTICAL MANUFACTURERS ASSOCIATION • 1411 K STREET, N.W. • WASHINGTON, D.C.

blood, milk and Maalox®

(magnesium-aluminum hydroxide gel)

Practically standard treatment, now, for bleeding ulcer. Why is Maalox included? Antacid therapy *must* continue long after the wound has healed, and patients started on Maalox tend to stay on Maalox. It tastes good; it's effective and will not cause constipation—three important reasons for Maalox over the long haul. Some physicians, we are told, order Maalox routinely for hospital patients on drugs which could irritate. They feel it reduces the likelihood of gastric discomfort. Supplied: Suspension; Tablets No. 1; Tablets No. 2. (Each Maalox No. 1 Tablet is equivalent to 1 teaspoonful and each Maalox No. 2 Tablet is equivalent to 2 teaspoonfuls of Suspension.)



ROHER

WILLIAM H. RORER, INC., FORT WASHINGTON, PA.

The one tranquilizer that

BELONGS IN EVERY PRACTICE

it's versatile: The years have proved that 'Miltown' (meprobamate) is the one tranquilizer that is helpful in almost every aspect of daily practice. Virtually any of your patients, regardless of age, can be given the drug with confidence, either as a primary treatment or as an adjunct to other therapy.

Outstanding record of safety: Over eight years of clinical use among millions of patients throughout the world — plus more than 1500 published reports covering the use of the drug in almost every field of medicine — support your prescriptions for 'Miltown' (meprobamate). This is why it *"belongs in every practice."*

dependable: 'Miltown' (meprobamate) is an established drug. There are no surprises in store for you or your patient. You can depend on it to help your patients through periods of emotional distress — and to help maintain their emotional stability.

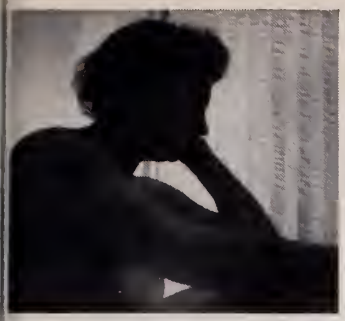
easy to use: Because 'Miltown' (meprobamate) is compatible with almost any other kind of drug therapy, you'll find it fits in easily with any program of treatment you are now using. It will not, therefore, complicate treatment of patients seen in clinical practice.

BRIEF SUMMARY: *Indications:* Anxiety and tension states, and all conditions in which anxiety and tension are symptoms. *Side Effects:* Slight drowsiness may occur and, rarely, allergic or idiosyncratic reactions, generally developing after 1-4 doses of the drug. *Contraindications:* Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use. *Precautions:* Should administration of meprobamate cause drowsiness or visual disturbances, the dose should be reduced. Operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Prescribe cautiously and in small quantities, to patients with suicidal tendencies. Massive overdosage may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after prolonged use at high dosage. *Complete product information available to physicians on request.*

USUAL ADULT DOSAGE: 1 or 2 400 mg. tablets t.i.d.

SUPPLIED: 400 mg. scored tablets, 200 mg. coated tablets.

CM-9694



The insomniac



The tense, nervous patient



The heart-disease patient



The surgical patient



The girl with dermatosis



Tension headache



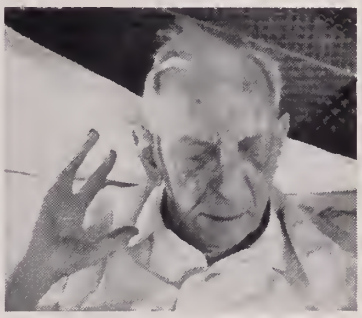
The woman in menopause



Anxious depression



Premenstrual tension



The agitated senile patient



The alcoholic



The problem child

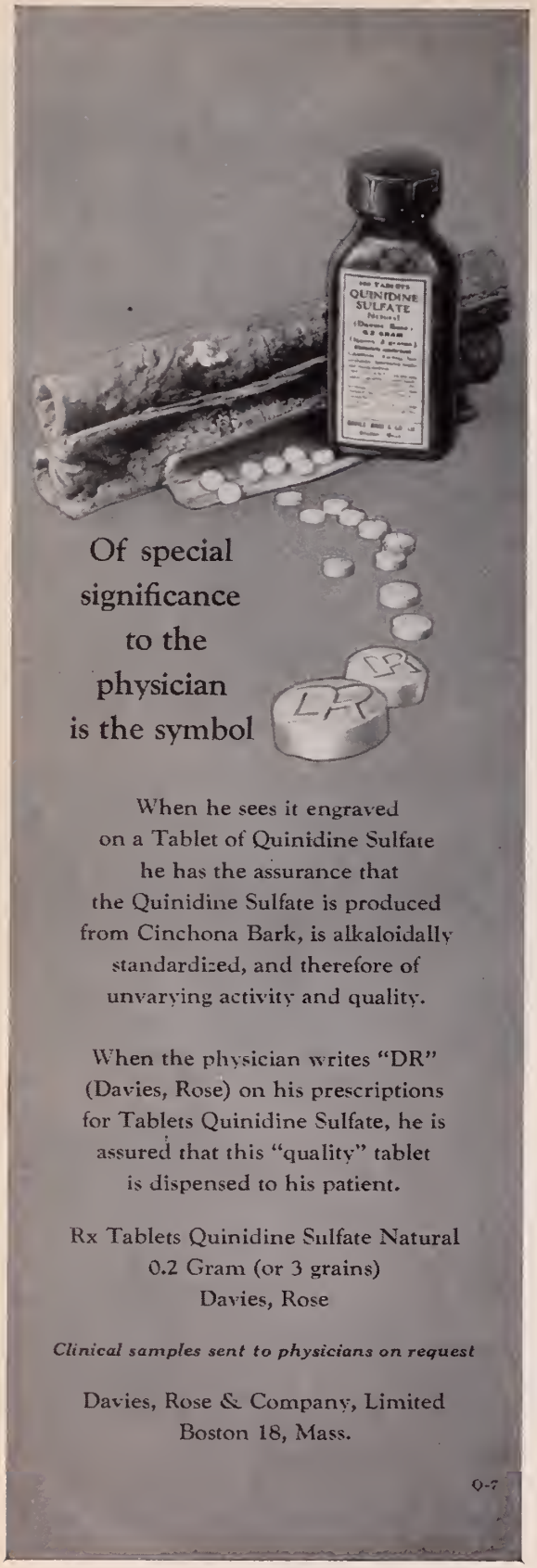
the original brand of
meprobamate

Miltown®



The G.I. patient

WALLACE LABORATORIES
Cranbury, N.J.



Of special significance to the physician is the symbol

When he sees it engraved on a Tablet of Quinidine Sulfate he has the assurance that the Quinidine Sulfate is produced from Cinchona Bark, is alkaloidally standardized, and therefore of unvarying activity and quality.

When the physician writes "DR" (Davies, Rose) on his prescriptions for Tablets Quinidine Sulfate, he is assured that this "quality" tablet is dispensed to his patient.

Rx Tablets Quinidine Sulfate Natural
0.2 Gram (or 3 grains)
Davies, Rose

Clinical samples sent to physicians on request

Davies, Rose & Company, Limited
Boston 18, Mass.

O-7

INDEX TO ADVERTISERS

American College of Cardiology 1
Ames Company, Inc. 14

Browne-McHardy Clinics 20
Burroughs Wellcome & Co. 29

Chatham Pharmaceuticals, Inc. 12
Chicago Medical Society 28

Davies, Rose & Co., Ltd. 34

Endo Laboratories 11

Geigy Pharmaceuticals 23, 24, 25, 26

Katz & Besthoff, Ltd. 1

Lederle Laboratories 3, 18, 19
Lilly & Company, Eli Front Cover, 16
Louisiana Coca-Cola Bottling Co. 1
Louisiana State Board of Health Second & Third Covers

Majors Company, J. A. 1

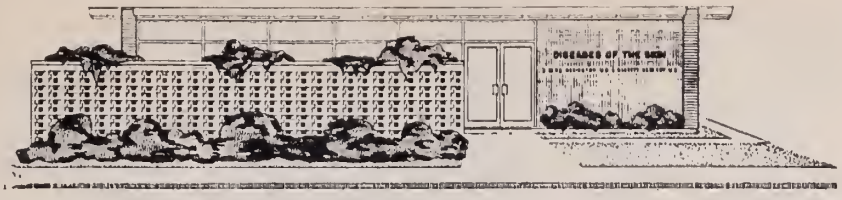
Parke, Davis & Company 4, 5
Peacock Surgical Co., Inc. 20
Pharmaceutical Manufacturers Assoc. 30
Professional Cards 35, 36
Professional Management Service 8

Roche Laboratories Back Cover
Rorer, Inc., William H. 31

Saunders Company, W. B. 13
Schering Corporation 15
Searle & Company, G. D. 17
Smith Kline & French Laboratories 10

Wallace Laboratories 6, 7, 12, 21, 27, 32, 33
Winthrop Laboratories 2, 9, 22

PROFESSIONAL CARDS



Courtesy Parking

Adjacent to Building

BARRETT KENNEDY, M. D.

V. MEDD HENINGTON, M. D

WM. J. PERRET, M. D.
(Associate)

DERMATOLOGY

4522 MAGNOLIA STREET

TWinbrook 1-4452 — 1-4453

Green Clinic

709 South Vienna Street — Ruston, Louisiana

Surgery
Marvin T. Green, M.D.
LaMoyne C. Bleich, M.D.

Obstetrics and Gynecology
Carl L. Langford, M.D.
David M. Hall, M.D.

Pediatrics
Bruce W. Everist, M.D.
O. Wharton Brown, Jr., M.D.

Eye, Ear, Nose and Throat
Harold H. Harms, M.D.

Radiology
M. Ragan Green, M. D.

Internal Medicine
Henry S. Roane, M.D.
Robert W. Sharp, M.D.
Joe L. Smith, Jr., M.D.

Dentistry
L. Felton Green, D.D.S.
Benjamin C. Baugh, D.D.

The Baton Rouge Clinic

134 North 19th St. — DI 8-5361

SURGERY
Joseph Sabatier, M. D.
Charles Mosely, M. D.
Charles S. Peter, M. D.

GYNECOLOGY & OBSTETRICS
Melvin Schudmak, M. D.
J. P. Griffon, M. D.
Donald C. Diefendorf, M. D.

UROLOGY
Mortimer Silvey, M. D.
Alfred M. Holden, M. D.

CONSULTANT RADIOLOGISTS
David S. Malen, M. D.
Allie Woolfolk, M. D.

INTERNAL MEDICINE
Charles S. Prosser, M. D.
Roger Reynolds, M. D. (Allergy)
Bruce L. Baer, M. D. (Gastroenterology)
Douglas Gordon, M. D. (Endocrinology)
David D. Kahn, M. D. (Hematology)

OPHTHALMOLOGY
George H. Jones, M. D.

PHILIP RONALD LORIA, M. D.

DISEASES OF THE SKIN

Dermoplaning — **Removal of Excessive Hair**

1104 Maison Blanche Bldg. — New Orleans 16, La.
By Appointment — 524-9621

PROFESSIONAL CARDS

JOHN C. HARDIN, JR.
D.D.S., M.D., F.A.C.S.
Maxillo-Facial & Oral Surgery
(Head and Neck Surgery)
121 Physicians & Surgeons Bldg., West
Phone 423-6901 Shreveport, Louisiana

BLAISE SALATICH, D.D.S., M.D.
PRACTICE LIMITED TO ORTHOPEDIC SURGERY
1212 Maison Blanche Building
JAckson 2-7697 By Appointment

DR. NATHAN H. POLMER
Physical Medicine—Rehabilitation
2209 Carondelet St.
2 - 5 P. M.
Off.: JA 2-0171 Res.: JA 2-3946

JAMES W. BURKS, JR., M. D.
DISEASES OF THE SKIN
SURGICAL PLANING FOR COSMETIC DEFECTS
FACILITIES FOR REMOVAL OF SUPERFLUOUS HAIR
925 Maison Blanche Bldg.
New Orleans 16, La. 529-3322

DR. R. ROSS, JR.
SKIN DISEASES
802 Pere Marquette Bldg. JA 2-0202

DR. RICHARD W. VINCENT
PLASTIC AND RECONSTRUCTIVE SURGERY
34 Maes Court — Medical Plaza
3600 PRYTANIA STREET
TWinbrook 5-4561

JUSTILLIEN H. FORET, M. D.
Practice Limited to Psychiatry
3706 Prytania Street
899-2618 By Appointment

CHARLES I. BLACK, M. D.
DISEASES OF THE SKIN
4550 North Boulevard 924-6256
Baton Rouge, Louisiana

Business Management Consultants
for Individual Practices, Groups and Clinics
PROFESSIONAL MANAGEMENT SERVICE
700 Maison Blanche Bldg.
524-1177 New Orleans 16, La.

HUGH MANY, M. D.
DISEASES OF THE SKIN
4900 St. Charles Avenue 895-6700
and
Nicholson-Baehr Clinic, Marrero, La.
By Appointment 341-1300

THE OWENS CLINIC
for
PLASTIC AND RECONSTRUCTIVE SURGERY
2223 Carondelet St. New Orleans 13, La.
Telephone: JAckson 2-0106
After Hours — Call Doctors' Exchange WH 5-4141

DR. HARTWIG M. ADLER
EYE, EAR, NOSE AND THROAT
Hours by appointment.
3439 Prytania Street TW. 1-4094
New Orleans

DR. CARL N. WAHL
Practice limited to
MAXILLO-FACIAL AND PLASTIC SURGERY
4500 Magnolia Street 891-6615

FRANK H. MAREK, M. D.
Radiologist
Medical Arts Bldg.
401 So. Ryan Street Lake Charles, La.
Phone HE 3-6361
Practice Limited to
X-ray and Radium Treatment and Diagnosis

LAFAYETTE SKIN
and
SKIN CANCER CLINIC
R. H. ROBINSON, M. D., Director
608 St. Landry St. Lafayette, La.
Telephone CE 5-2405

DR. HARRY ZOLLER
HEARING AND DEAFNESS
DISEASES AND SURGERY OF THE EAR
1109 Pere Marquette Building
JA. 5-2535 By Appointment

JOHN H. COUNCE, M. D.
Diseases of the Skin
1413 Delachaise St. New Orleans
Office Hours
By Appointment TW 1-2813

FREDERIC W. BREWER, M. D.
PRACTICE LIMITED TO PSYCHIATRY
1008 Maison Blanche Building
JA 5-4047 By Appointment

The Cancer Commission of the Louisiana State Medical Society



volunteer for all seasons

There is no season for cancer. And fighting it is a year-round job for the American Cancer Society volunteer.

Particularly for you, doctor, our *key* volunteer. Your thinking, experience and guidance are responsible for the formulation of our policies and programs; your knowledge and skill are essential to their execution. And so you serve on our National, Division and Unit boards. Act on our committees. Talk to lay audiences at our film showings. Help evaluate our research grants. Advise on our professional publications. Raise funds. Assess our program materials. The list goes on and on.

The American Cancer Society keeps you busy, doctor. We depend upon you. We hope that more and more of your fellow physicians will join you in working with us—all year, every year until the fight against cancer is won.

AMERICAN CANCER SOCIETY®

LOUISIANA DIVISION, INC.
204 Delta Building New Orleans 12, La.

Louisiana State Board of Health

JAMES R. STRAIN, M.D., M.P.H., *President*

LIBRIUM®
(chlordiazepoxide HCl)
the successor
to the tranquilizers

ROCHE

In prescribing: Dosage—Adults: Mild to moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d. Cautions—Occasional side effects, often dose-related, are drowsiness, ataxia, minor skin rashes, menstrual irregularities, nausea and constipation. Paradoxical reactions may occasionally occur in psychiatric patients. Individual maintenance dosages should be determined. Advise patients against possibly hazardous procedures until maintenance dosage is established. Though compatible with most drugs, use care in combining with other psychotropics, particularly MAO inhibitors or phenothiazines; warn patients of possible combined effects with alcohol. Observe usual precautions in impaired renal or hepatic function, and in long-term treatment. Caution should be exercised in prescribing any therapeutic agent for pregnant patients. Supplied—Capsules, 5 mg, 10 mg and 25 mg, bottles of 50 and 500.

The New York Academy of Medicine

DUE IN TWO WEEKS UNLESS RENEWED
NOT RENEWABLE AFTER 6 WEEKS

DATE BORROWED	BORROWER
APR 2 3 1964	